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RECORDS
OF
OBSTETRIC CONSULTATION PRACTICE;
AND
A TRANSLATION
OF
BUSCH & MOSER ON UTERINE HÆMORRHAGE

(With Notes and Cases.)

BY
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DEDICATION.

To my Colleagues, the Surgical Officers of the Norwich Lying-in Charity, I desire to dedicate this small contribution to Obstetric Literature.

For the courtesy and attention I have invariably received from them since my connexion with that very useful Institution, I offer my sincere acknowledgments; and am glad to avail myself of this opportunity to express my sense of their talent and honourable conduct as Members of our Profession.

NORWICH, FEBRUARY 1856.



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P R E F A C E.

BELIEVING it to be the duty of every member of our profession to contribute his mite in furtherance of the more complete understanding of the difficult science we profess, I have published the following pages. In my early practice I derived much comfort and benefit from the perusal or relation of cases which had occurred to others, and have always been strongly impressed with the idea that no more useful mode of instruction can be adopted; not simply because it is advantageous to know that such and such treatment has been found successful in the hands of this or that person; but more from the fact that by thus having various kinds of management brought into view, the mind is led, as it were, to the contemplation of the subject, to just reasoning concerning it, and to the due consideration of what plan, amongst those recommended, may be the best for us to select in each particular instance. Dogmatic statements, if believed and followed, may lead to idleness, and afford an excuse for want of personal investigation; but the perusal of cases, plainly

and honestly reported, has a natural tendency to induce a train of thought which cannot fail to be beneficial as an exercise of the mind, and will be the most likely means of exciting original views, or of confirming such as have already been entertained as the result of practical experience. Feeling this myself, I am hopeful that I may be doing something to satisfy similar requirements on the part of others by the publication of a series of consultation Cases; and as life is uncertain, I plead this as an excuse for not delaying it for the sake of further numbers or experience.

There can be no question as to the progress of medical science having been much hindered by the loss of knowledge possessed by many of those whom death has removed from the scene of their labours; a vast amount of practical information, than which nothing is more wanted in such a profession as our own, perishes year by year with the possessors of it; and those who succeed them have to pass through the severe ordeal of painfully-gained experience ere they can reach the same amount of capability of doing good to others.

The busy practitioner perhaps feels no inclination to devote the little time he can snatch from the arduous duties of his calling to the additional toil of writing; he may have no taste for literary pursuits; he may have no time to devote to them; his health may be unequal to the task, or disease or death may deprive him of the opportunity; and so it comes to pass that his stores of

knowledge, available to himself in his own generation, are lost to posterity for ever.

I am not vain enough to imagine that my present attempt will impress my readers with the idea that I am supplying any great deficiency of the nature complained of; but if it were an example generally followed, facts would accumulate, and facts in physic are most valuable things; and however little the value of the contributions of each separate individual, a multiplication of them would inevitably be productive of much general good.

In addition to my own consultation cases and the observations I have attached to them, I have introduced an Essay on Uterine Hæmorrhage, originally translated for another purpose: it is too long for insertion in a journal, but I have had the assurance of several competent judges that it is worthy of being published in an English garb; and I have also thought it a satisfactory basis on which to superadd a few notes and cases, illustrative of my own more recent experience of various forms of uterine hæmorrhage.

PART I.

ON PUERPERAL FEVER.

ON THE USE OF THE VECTIS.

ON THE INDUCTION OF PREMATURE LABOUR.

ON PUERPERAL CONVULSIONS.

ON CRANIOTOMY.

PUERPERAL FEVER.

THERE is scarcely a subject, in the whole range of medical science, more deserving of persevering examination and attentive study than that of puerperal fever; and thus numerous treatises have been written upon it at different periods, and *descriptions* given of the disease by acute observers which will probably never be excelled. It is not difficult to account for the general interest excited by this subject; whether we regard it as a disease making its attack at a time, and under circumstances, when the best feelings of the human heart are most ready to sympathize with the sufferer; whether we consider it as one capable of producing the greatest amount of irreparable mischief in the shortest space of time; or lastly, as a disease which has usually been considered, except at its onset, as quite beyond the power of remedies: in whatever light we view it, it cannot appear to us otherwise than as an enemy demanding the whole force of medical knowledge and appliances to deprive it of its malignity and tame it into submission.

We have proofs of the existence of puerperal fever at a very early period; and the following case, quoted

from Hippocrates (the *First Book of Epidemics*) must, I think; be admitted as a good example. "The wife of Philinus, having been delivered of a daughter, the lochial discharge being natural, and other matters going on mildly, on the 14th day after delivery was seized with fever, attended with rigor; pain in the pit of the stomach and right hypochondrium; pain in the genital organs; lochial discharge ceased. Upon the application of a pessary all these symptoms were alleviated; pains in the head, neck, and loins remained; no sleep, extremities cold; thirst; bowels in a hot state; stools scanty; urine thin and colourless at first. On the 6th, towards night, senses much disordered, but were again restored. On the 7th, thirsty; the evacuations bilious and high-coloured. On the 8th, had a rigor; acute fever; much spasm, with pain; talked much, incoherently; upon the application of a suppository, rose to stool and passed copious dejections, with a bilious flux; no sleep. On the 9th, spasms. On the 10th, slightly recollected. On the 11th, slept; had perfect recollection, but again immediately wandered; passed a large quantity of urine, with spasms, thick and white. About the 14th day, startings over the whole body; talked much; slightly collected, but presently became again delirious. About the 17th day became speechless; on the 20th died."

To the Sydenham Society we are indebted for a collection of all the best treatises that have been published on puerperal fever; and any one who will take the trouble to read the volume on "Diseases peculiar to Women," published in 1849-50, will find that as far as relates to the *history* and *nature* of this formidable disease, nothing more can be required. It is true there

is a variety of opinion as to almost every point connected with it, except with reference to its fatality ; there are various conjectures as to its proximate cause, its contagiousness, and its treatment ; but the descriptions given of its *symptoms*, especially that by Dr. John Clarke, and of the post-mortem appearances, are so truthful and accurate that it would be a needless expenditure of time to do more than refer to them. And yet, to quote the words of J. Hulme, "Nurses and women in general seem, in a great measure, ignorant of such a disease as this being incident to lying-in persons. I dare venture to say that the very name of it is as much a stranger to most of them as if no such malady existed, and yet there never was a time when this disease did not exist. The consequence is, that knowing no danger, they fear none ; whereas, on the contrary, they should be taught to dread the name of puerperal fever as they would the name of pestilence or plague ; for I fear that the one destroys not more than the other. Like a fierce and untamed enemy, the one spreads his hostile banners in open day, and feasts on carnage and destruction, till, glutted with slaughter, he himself sinks down and dies ! But the other, like a secret revengeful foe, stabs in the dark to the very vitals, and though he kills one only at a time, yet he is privately slaying every day, and never satiated ; thus making up by length of time what the other does by a sudden devastation. They should be taught to know, I say, that pain and soreness of the belly, coming on soon after delivery, unless speedily relieved by judicious assistance, will prove mortal in a few days. They should be taught to know that these complaints are attended with a fever, which is called the puerperal fever."

Of the hitherto fearfully dangerous nature of puerperal fever, no reasonable doubt can for a moment be entertained. Dr. Gooch says: "When I saw the patients after it had been going on two or three days, I seldom or never saved them. I was soon satisfied that the disease was incurable in this stage."

Dr. Leake remarks: "There is not perhaps any malady to which the human body is subject, where powerful remedies of every kind have been tried with more diligence and less success."

According to Dr. John Clarke, "Perhaps there is scarcely any disease which we are acquainted with whose consequences are more fatal than this. As far as I have observed, three-fourths of those who have been seized with it have fallen sacrifices to its severity. It has not occurred in my sphere of observation to see *any recover in whom the swelling of the belly has been in any very great degree.*" Again he says: "This disease is less obedient to the powers of medicine than almost any which I know. Its attack is so very insidious, and often entirely unperceived, and its fatal termination is frequently so sudden, that the time when medicine could be useful has often elapsed before it has been even known that the disease existed at all."

Dr. Gordon says: "When the patient has been ill for a longer space than twenty-four hours before I was sent for, I generally found that the disease was no longer in the power of art."

Dr. Labatt reports that, of 1010 patients, admitted into the Dublin Lying-in Hospital, from September 1st to December 31st, 1819, 129 took the fever (puerperal) and 61 died.

Dr. Fergusson reports that at the General Lying-in

Hospital, in the twelve years from March 1827 to April 1838, 205 cases of puerperal fever occurred, of which 68 died. In the year 1838, twenty in twenty-six died; and in the month of January in that year, one only out of nine was saved. In 1845, at the Rotunda Lying-in Hospital, of fourteen attacked ten died. But it is needless to multiply instances of the great fatality of this disease, which is acknowledged by every writer upon the subject, and which I feel sure can be confirmed by every practitioner of experience.

It is not my intention to write a complete essay on puerperal fever, nor to enter fully into the history, causes, symptoms, or pathology of this distressing malady. The volume I have before referred to, published by the Sydenham Society, and especially the excellent article on puerperal diseases in Dr. Copland's *Dictionary*, will fully demonstrate all that requires to be known with respect to these divisions of the subject. But in the few observations I am about to make, I shall endeavour to point out some of the peculiar and constant phenomena attendant upon it, reducing the subject almost to what may be considered facts; limiting theoretical disquisitions as much as possible to those which necessarily arise out of such facts; and to lay particular stress upon what is very conspicuously a more successful mode of treatment than what has ever, except in a few instances, been practised.

There is no doubt that what is called puerperal fever appears under various forms; but I believe it sufficient for all practical purposes to divide it, as some have done, into two kinds, namely, the simple inflammatory, and the typhoid; the latter being by far the more common.

With respect to the period of its invasion, great

variation obtains; most frequently it comes on a few days after delivery, but sometimes at a later period. Denman states: "There are not wanting instances where it has been evidently formed before delivery, and at every intermediate time, till five or six weeks afterwards." In the purely inflammatory kind, it seems highly improbable that the early symptoms, which are of a severe and active character, should be overlooked, and valuable time be lost; neither is there much difficulty in determining in such cases the proper method of treatment. I confess I have rarely seen cases of this decidedly inflammatory or acute type, and the observations I have to make refer more to the various degrees in which it shews itself as an atonic or typhoid disease.

And with respect to these latter varieties, instead of entering upon a full and lengthy description of the symptoms, a task which has been most satisfactorily accomplished by others, I shall limit myself to the enumeration of certain distinctive signs, which, when present, ought to lead us to suspect danger, and adopt what, as far as my experience goes, is the only safe and successful line of treatment. These particular signs I would simply enumerate as follows: and if I be right in my conjectures respecting them, we shall be saved much of the uncertainty, both as to the nature of the disease and the proper remedies, which has perplexed and disappointed even the most talented of those who have devoted their time and attention to the subject.

The first symptom that attracts attention in most instances is the occurrence of a rigor at some period after labour, from the day after to two or three weeks, followed by uneasiness in the loins and abdomen, more or less nausea, an altered condition of the lochial discharge,

and accompanied with a frequent pulse. I have always found, in the disease under consideration, a remarkable *frequency* of pulse, and generally it is also feeble and small; in some cases, however, it is hard and not very compressible; but its *smallness* and its *frequency* are constant. With respect to the pain in the abdomen, it occurs in various degrees; sometimes it is severe, sometimes moderate, and frequently only what I have described above, an *uneasiness*; but even when pain has scarcely been complained of, or has been said to be absent, I have invariably found some degree of tenderness in the hypogastric or iliac regions under firm pressure. And whatever may have been the degree of abdominal or pelvic pain, the abdomen has invariably become tympanitic and assumed a peculiar conical shape; the time at which this happens, and the extent to which it goes, depending upon the more or less rapid march of the disease. In addition to these phenomena, another almost constant symptom is a peculiar state of the nervous system: it can scarcely be said to be delirium, although in some cases this is very decidedly present; but there is a degree of wandering, semi-unconsciousness, indifference to bodily suffering, dozing, indicative of disordered sensibility, and accompanied by a very peculiar physiognomy sufficient of itself almost to declare the nature of the attack. This peculiar aspect has been often noticed, and Dr. Douglass remarks upon it thus: "The countenance is here pale and shrunk, with an indescribable expression of anxiety; an expression altogether so peculiar that the disease could on many occasions be pronounced or inferred from the countenance alone." The patient can generally be easily roused, and remains sensible throughout; but the countenance

retains its anxious appearance, whether anxiety be expressed by the patient or not, and even when she speaks of her illness as if she had no foreboding of difficulty or danger. The statements of the patient as to her own condition, when this state of countenance is present, can indeed scarcely ever be relied upon; and as an instance of this, Dr. John Clarke relates that he once saw a patient, who, on the seventh day of the disease, at two o'clock in the afternoon, begged that she might be allowed to rise out of bed (which was not permitted) alleging that she was nearly well, and she died at three the next morning. He also says he has known the swelling of the abdomen enormous in degree, and yet the patient has scarcely uttered any complaint, unless when it was firmly pressed.

Another symptom, which, as far as my experience goes, is almost always present, is a diminution or stoppage of the lochia, which during their decline are of a more or less offensive nature. It is not my intention to enter upon any controversial discussion as to whether the depraved secretions from the uterus, in the shape of putrid lochial discharge, be or be not the essential cause of puerperal fever; but I cannot refrain from expressing my belief that such discharges, whether arising secondarily as a result of inflammation, or themselves causing inflammation, or depending upon the retention of coagula or pieces of placenta or membranes, are capable of being absorbed into the system by the vessels of the uterus and giving rise to the worst forms of uterine phlebitis. If they are not generally the cause of disease, I believe their presence is always a source of danger, and that care should be taken always to remove them.

For the purposes for which I have principally written this paper, the symptoms I have already referred to are sufficient indications for the plan of treatment to be advised; and of themselves make up a case of puerperal disease never to be encountered without dread or apprehension. I would say they were almost constant in, and essential to, the low or typhoid form of puerperal fever; that is to say, the rigor: abdominal or uterine pain, uneasiness, or tenderness; rapid pulse; disordered sensorium; tympanitic body; and depraved lochial secretion. The various other symptoms which present themselves differ according to the precise nature of the attack. The skin is hot, the tongue furred, and there is thirst, when the abdominal inflammation is more acute. When the fever is of a low type, the skin is cool and often moist; the tongue pale and flabby, or *streaked* and dry; and there is dull headache, nausea, heavy breathing, and sometimes vomiting. In the former case the urine is generally high-coloured and scanty, and the bowels constipated; in the latter, the urine may be pale and plentiful, and there is diarrhœa; and in fatal cases, this last symptom, when present, generally continues and proves uncontrollable.

“When the puerperal fever proves very violent, whether the disease be single or combined, it generally terminates in a diarrhœa.” (*Hulme.*)

It will have occurred to all experienced practitioners to have had cases in which intestinal irritation from fœcal loading or impaction (so common during pregnancy) has given rise to a state of things not very easily distinguishable from the early symptoms of puerperal mischief; and so frequently does this state of bowels exist, that I have often found in genuine puerperal

fever, a loaded condition of the bowels concurrent even with diarrhœa. The same thing has been observed by Denman, who says, "The stools often come away involuntarily, being always preceded by an increase of pain, and the evacuation constantly gives a momentary relief. They are very fetid, of a green or dark brown colour, and working like yeast; and it is remarkable, that after the long continuance of the looseness, when the patient has taken little nourishment, large and hard lumps of excrement will be sometimes discharged, which one might suspect to have been lying in the bowels a long time before delivery."

I have now referred to all the particulars attendant upon the typhoid varieties of puerperal fever, or such cases as are not of a simple and purely inflammatory nature, which I deem essential to form a right judgment as to treatment; and in their *ensemble*, they constitute a morbid derangement of the system of a most dangerous description. I have endeavoured also to separate from the subject, and pass over in silence, all theories or conjectural points that might lead the mind astray, and beget confusion and distrust. I now come to the great object of all medical observations and inquiries,—the *treatment* of this dreadful disease; and in order to clear the way for what I deem essentials, I will in the first place make a few remarks upon certain remedies which have at different times, and with no little authority, been recommended.

1. *Venesection*. This I denounce entirely as a most dangerous proceeding in any case that is not an acute simple inflammation of one or other of the abdominal organs.

2. *Leeching*. Of the propriety of this I entertain

great doubts in the form of disease more particularly under consideration ; and am sure that in many cases, particularly after the first day or two, it is inadmissible. Great abdominal *tenderness* is the condition that would seem most to require it.

3. *Calomel*. I believe what is usually termed the mercurial treatment, is almost always attended with disastrous and fatal results, producing uncontrollable diarrhœa, and urging on the disease to a more rapid termination. From what I have seen of the effect of mercury in puerperal fever, I shall always be afraid to prescribe it, except in a single aperient dose at the commencement of the disease. I believe it to be positively injurious.

What then are we to do in order to defeat this dreadful scourge of humanity? How are we to attempt a cure of this fatal disease?

In the year 1814, Dr. Brenan, of Dublin, and in 1822, Dr. Douglass, published on the beneficial effect of *turpentine* in the cure of puerperal fevers ; and Dr. James Copland importunately advocates the employment of this remedy. In his very valuable *Dictionary*, under the head of "Puerperal Fevers," he thus expresses himself, and I make no excuse for quoting his urgent appeal. "Having myself since 1815 prescribed this substance in numerous diseases, malignant, febrile, and inflammatory, and having for many years employed it in puerperal diseases, I have been induced to make inquiries respecting its use by other practitioners; and yet, notwithstanding the notoriety of the practice, and its undoubted success if duly and appropriately prescribed, I have not heard of its having been employed by any other physician in this metropolis besides

myself. This is somewhat singular, when the general fatality of the disease, and the highly favourable reports of the practice which have been made by Dr. Brenan, Dr. Douglass, and myself are considered. What are the obstetric practitioners, who appropriate the treatment of puerperal diseases, about? Should the obstetrician cease to be physician, in respect of liberality and candour of sentiment, and of a due appreciation and adoption of remedies recommended by others?"

Equally remarkable is it that in the work on "Diseases peculiar to Women," published by the Sydenham Society, and edited by Dr. Fleetwood Churchill, although it contains an historical sketch of the epidemics of puerperal fever by the editor, and treatises on the disease by Drs. Denman, Leake, Kirkland, Mr. C. White, Drs. Butter, Joseph Clarke, John Clarke, and Gordon, turpentine is nowhere recommended or even scarcely mentioned as a remedy; although it is incidentally recorded on the authority of Dr. Farre, that out of thirteen cases, eleven died; that all which had been bled died; and *that the only two which recovered* had not been bled, having been treated by *turpentine*!

I have appended to this paper twenty-one cases of puerperal disease treated by turpentine; and I think it will be acknowledged that the success attending the treatment far exceeds what is usual under the use of other means. It will be seen that the cases are not exactly similar, but they all present features of severity and danger sufficient to induce those practitioners who had the charge of them to seek aid in consultation. It will be observed that fifteen of the cases were cured, and that six died; and if the cases of those who died be carefully examined, it will be found that even they corroborate

in a measure the value of the turpentine treatment, for some relief was almost always obtained from its use. In the first fatal case there was a doubt as to whether it was not a case of fever such as had been prevalent in the house, and therefore not strictly puerperal. In the second and sixth the patients appeared to be recovering from the puerperal disease, and fell victims to super-added chest affections. This possibly might have been a metastasis of the abdominal disease to the lungs, or a secondary affection dependant upon purulent absorption, although I do not think from the symptoms that such was the case; but I nevertheless regret that we were not allowed to solve the difficulty by *post-mortem* inspection.

The third fatal case was that of a lady who had experienced a settled presentiment some months before her confinement that she should die in childbed. It was strictly a *presentiment*, for she was the direct opposite to timid and apprehensive; indeed, most patient and contented under all the trying circumstances of her melancholy illness. She, too, appeared to have derived considerable relief from turpentine, and seemed to die more from the exhaustion of her illness supervening as it did upon a very large loss of blood, than from the specific effects of uterine disease. The exciting cause of her fever was, most probably, the portion of membranes which had been retained and become putrid in the uterus.

The subject of the fourth death was in an advanced stage of consumption, and died in a paroxysm of dyspnæa.

The fifth I saw only the evening before her death, up to which time she had been treated with calomel and

opium. She was the subject of chronic bronchitis, and died of uncontrollable diarrhœa. There was no time for turpentine to act.

Seven out of the last eight cases recovered, and furnish surely a very pressing and powerful inducement to those who are consulted in such cases, to give the turpentine treatment a careful and impartial trial. There is scarcely another disease whose mortality is proportionably greater; there is no other remedy that appears to possess so much power to control it; and the indifference and apathy exhibited by writers on puerperal fever, and by practitioners, with respect to turpentine (since it was introduced as a remedy for this disease by Dr. Brenan, forty years ago,) is an evidence that the caution demanded in the use of a new remedy may be carried so far beyond its just limits as to be not only an individual but a public calamity. When, in answer to the appeal made by Dr. James Copland, before quoted, I first prescribed turpentine in puerperal disease, I was in doubt about the best dose and mode of administration: a perusal of the cases will shew in what manner it has been employed; but I shall conclude my paper by representing what now, after such experience as I have had, I consider the best plan of treatment.

If called to a patient of robust constitution, and in a very early stage of the disease, the abdomen being at the same time very tender to the touch, I would apply a few leeches, determining the number by the strength of the pulse; but in no other way should I be induced to lessen the patient's strength by abstraction of blood, and then only under the circumstances described. If the bowels appeared to be loaded, or if they had not acted well, I should give a dose of ʒij Sp. Terebinth.

with ʒij, ʒiij or ʒiv of castor oil, according to the facility with which aperients had usually acted; and at once begin the application of turpentine stupes to the abdomen. Should the castor oil and turpentine not have acted in three or four hours, and the symptoms continue, I would give a turpentine enema, and ʒj of turpentine by the mouth every four hours: and the following is perhaps as good a form as any; or it may be floated on warm milk or coffee.

R̄. Sp. Terebinth. ʒj
 Vitell. unius ovi
 Aq. Cinnam. vel Menth. pip. ʒ vjss.
 Syr. Aurant. ʒ ss. m. f. Mist.
 Cap^t cochl. ij ampl. 4 tâ quâq. horâ.

In addition to these, I would never omit washing out the vagina daily with warm water; and in the event of much restlessness, an opiate should be given at night.

These may, I think, be considered the chief remedies: the stupes should be used so as to keep the skin of the abdomen slightly reddened, and in some cases so as to produce vesication; and the internal administration of turpentine should be continued until the symptoms have subsided, and especially the pulse is much reduced in frequency; or until the stomach rebels against it, which I have seldom found to take place until its use became no longer necessary. There are minor matters in the treatment which must be left to the discretion of the practitioner to resort to or to omit; such as a repetition of enemata, or an occasional dose of rhubarb or some mild aperient; the use of wine, milk, broth, &c.; but strong purgatives may suddenly become injurious and nullify all our previous attempts at cure;

indeed, a diarrhœa is so often the forerunner of death, that I should prefer enemata in combination with turpentine internally, as a rule, to any purgative whatever. Neither is the plan I have described applicable to typhoid cases only; in these, indeed, leeching is out of the question; but even in the inflammatory cases, where bleeding or leeching may in the first stage be necessary, I believe there is no better treatment afterwards than by turpentine internally, and externally in the form of stupes to the abdomen.

It will naturally be inquired, In what way does turpentine act upon the system so as to destroy, as it were, the essence of puerperal fever and lead to recovery? That it does succeed very often, is not only proved by the cases I have myself witnessed, but by others treated by other persons with equally good effect. But I must confess my inability to explain why it should be anti-inflammatory, antiseptic, restorative, for such it appears to be in this disease. How does turpentine cure iritis? A careful observation of the therapeutic action of this medicine is a desirable employment for medical practitioners, and ere long we shall probably be in a better condition to answer the questions proposed. Before taking leave of the subject, let me say a word about certain probable means of prevention, for that is better than cure. Now, without entering upon an examination of the causes generally, there seem to be two circumstances that may occasion the disease, both of which may be safely and effectually removed; namely, a loaded state of the bowels, and an offensive condition of the lochia. I do not wish to lay too much stress upon these circumstances, which to some may appear insufficient to the production of so great an evil; but I must express

the feeling of my own mind, that if they be remedied, puerperal fever will often be prevented; and that securing full relief, not purging, a day or two before labour by castor oil, and a day or two after it, by emollient enemata; and carefully washing out the vagina daily with warm water during the flow of the lochia, are extremely desirable precautionary expedients, especially during the prevalence of puerperal fever, typhus, or erysipelas.

Dr. Disse published a report in February of the present year* (1855) of an epidemic of puerperal fever in Brakel, of a septic character. The epidemic appeared on the 15th of September, 1852, and lasted throughout October, November, December, and ended about the 11th of January, 1853. The population of the town, which is one of the healthiest in Westphalia, is 3000; and between the periods mentioned 28 women were delivered, of which 13 were attacked with the fever, and 15 remained healthy. Of the 13 who were attacked, 12 died—10 were multiparæ and 3 primiparæ, including the one who recovered; and it is stated that the patient who recovered was treated with turpentine, internally and externally.

RESUMÉ OF CASES.

Total number in which turpentine was used, 21.—Cured, 15.

Died, 6.

5 Primiparæ.	Earliest age 21.	1 Premature.
7 occurred in 1851.	6 Cured.	1 Died.
4 " " 1852.	1 "	3 "
2 " " 1853.	1 "	1 "
6 " " 1854.	6 "	
2 " " 1855.	1 "	1 "
<hr/> 21	<hr/> 15	<hr/> 6
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* British and Foreign Med. Chir. Rev. No. xxxi. p. 270.

Case 1.—A healthy young woman, 21 years of age, was confined with her second child on the 31st of Jan., 1851, and had an easy, rapid labour; slight hæmorrhage followed, but she went on quite well until the 3rd of February, when, in the evening, her pulse became accelerated, and she had a fainting fit after a relief from the bowels. The nurse told me the lochial discharge had been somewhat offensive all that day, but that she seemed well and cheerful until the evening. On the following day, I was requested to see her. I found the lochial discharge sufficient in quantity, but rather foul. Milk freely secreted. She complained of no pain in the body; but firm pressure with my hand caused considerable uneasiness in the situation of the uterus. The pulse was 130, and feeble. No sickness—no general peritonitis. Tongue white and indented; lips shining and inclined to dryness. Great disinclination to exertion, amounting to prostration; eyelids half closed and eyes dull; countenance very like that of a person under the effect of an opiate, or the commencement of cerebral affection in typhus. Sharp pain occasionally in the head. Quite sensible when roused, but much inclined to drowsiness; respiration not quickened, but heavy (cerebral.) Has had no distinct chill, but has several times felt as “if something were passing through her veins.” At 1 P. M., turpentine stupes were ordered to be applied frequently to the abdomen, and a dram of spirit of turpentine to be taken internally, in a little cold tea, and repeated in two hours, with some good broth in the interval.

4 P. M. — Countenance more animated; eyes more intelligent; pulse dropped to 84; and she expressed herself as altogether much better. This amended con-

dition lasted until near seven o'clock ; and then, after a sleep of short duration, she again awoke depressed, and with a pulse at 120. Only one dose of turpentine had been given, and the effect of it had passed off ; she now took a second, which, again, in a short time reduced the pulse to 82. She had taken a little mutton broth, which nauseated her ; but she has been able to take milk without inconvenience.

At 10 P. M. the pulse had quickened a little, and another dram of turpentine was given, with directions to have it repeated every three hours. She was, upon the whole, better, but there was still tenderness in the region of the uterus. Rept. Fotus Terebinth. c̄ Tr. Opii. Another dram of turpentine was given at one the next morning (February 5th), and produced a little nausea ; at 5 o'clock, half a dram was given, and this dose produced no inconvenience. She took some warm milk, two biscuits, and a cup of tea during the night, and slept a little at intervals. Respiration easy, and pulse steady at 84, although feeble. Urine passed well. Bowels acted once. Was inclined to faint once or twice, but warm milk removed the sensation. One turpentine stupe had been applied, and once the hot flannel without turpentine, and the abdomen was less tender. At 11, she took another ʒss of Sp. Terebinth. At 3 P. M. another ʒss, and another turpentine stupe. Milk taken frequently ; pulse 80 ; lochia increasing in quantity, and less offensive. At a little before 8 P. M. she felt a slight return of headache and abdominal pain, and asked for another dose of turpentine, which quickly removed both. At 10.30, I visited her again, and found her very cheerful and composed. Pulse 72, and not of less power ; abdomen very little tender ; milk taken

frequently without inconvenience. Has been able to turn a little in bed this afternoon without pain in the uterine region.

Feb. 6.—Had a dose of turpentine (3ss) at 5 A. M. On visiting her at eleven, I found the bowels had acted once. Urine plentiful. Voice more distinct. Pulse 60. Had taken milk freely, and twice a little wine and water. Expressed herself as feeling much better.

3 P. M.—Same state. Linen changed to-day. Body very little tender; pulse 60.

11 P. M.—Still better. Pulse 60. Milk and beef tea. Stupe applied again, but no more turpentine internally.

Feb. 7.—Has taken no more turpentine internally. Stupe once. Abdomen soft and scarcely at all tender. Is cheerful; takes nourishment freely, and occasionally some wine and water. Pulse 60.

Received a note in the evening stating that she was so much better as not to require me to visit her again until the morning.

Feb. 8.—Found her cheerful and quite free from pain; lochial discharge natural. Altogether in a very promising condition. From this time recovery was rapid and complete, and she has since had one or two children without any untoward circumstances resulting from her former illness. (Jan. 1855.)

Case 2.—Mrs. — æt. 23 years, was confined on Friday, the 28th of February, 1851. On the 3rd of March I was requested to see her on account of an attack of puerperal fever, which commenced the day before. Her mind had been distressed by the ill behaviour of her husband, who had deserted her. This

was her second child, living and healthy. Her labour was not severe. She had already taken two doses (5j each) of Sp. Terebinth. and had turpentine stupes applied to the abdomen, under the advice of her medical attendant; and I found the body, instead of being tense and painful as it had been in the morning, soft, yielding, and but little tender. The pulse, however, was 100, and not decreasing in frequency; and her nervous system was oppressed as if she were under the influence of narcotism, a symptom frequently to be observed in these cases. She was better in this respect, I was informed, than in the morning, and the lochia, which were then scanty and offensive, were again of a better colour and increased in quantity. I recommended a continuance of the internal and external use of turpentine, and had hope of her recovery. She had been once sick after taking the medicine, perhaps in consequence of having taken too freely of milk.

I did not see her again, but learned that in a few days she was convalescent.

Case 3.—Mrs. A., æt. 28. Had been confined a week, with her second child, after a good natural labour. Had shivering on the fourth day, followed by a strong rapid pulse and pungent heat of skin. There was no pain in the body, and the lochia were not offensive. To-day, April 25th, 1851, I found her with a typhoid look, a tongue inclined to dryness, a pulse beating at least 150, and a *hot* skin; but both pulse and skin of a character denoting action without power. There had been some diarrhœa. Her mind was quite collected, and she expressed herself cheerfully; but I felt greatly apprehensive that she would die, unless

perchance turpentine would save her. She had been attended by a very judicious practitioner, who had prescribed calomel and opium. To take 3j Sp. Tereb. every four hours.

26th.—Has taken several doses of turpentine, and says she is better; but her pulse is more than 150, with less power than yesterday, and there has been a little wandering. The diarrhœa was stopped by Mist. Cretæ c̄ Opio.

27th.—Was sinking gradually during the night, and died this morning without having had any abdominal symptoms; and as several cases of fever had occurred in the house, apparently in consequence of a privy badly situated and badly ventilated, I have doubts as to whether this was a case of genuine puerperal disease.

No examination allowed.

Case 4.—On the 5th of May, 1851, I was requested to visit, in consultation, Mrs. L., who had been confined a month. She got about at the end of a fortnight, and was then attacked with peritoneal inflammation, which was subdued by active depletory measures. I found her with a forlorn countenance, furred tongue, feeble pulse, but not more than 72 in frequency, and suffering from considerable pain in the region of the uterus and ovaries, with tenderness on pressure. She had passed several unhealthy bilious stools, but had not vomited. I advised turpentine and opium fomentations, and a dram of spirit of turpentine every five hours internally, with mild nourishment and a warm gruel enema.

6th.—On the following day her countenance was improved and her manner more cheerful. Pulse 70 and of fair strength. Pain in abdomen much abated.

Bowels well relieved by the enema. More nourishment to be given, and the turpentine, externally and internally, to be continued.

This patient had a rapid recovery, and I was not required to see her again.

Case 5.—Mrs. C., of sallow complexion, and excitable temperament, was seized with severe pain in the right side, simulating pleurisy; she was in the ninth month of pregnancy, and had had several children before; the pain was of a very acute character, but without the physical signs of pleurisy; it was aggravated by warm applications, but much relieved by the application of laudanum on lint. Five days after, she was well enough to walk to church. The pain commenced on the 20th of May, 1851, and on the 4th of June she was confined, having been as well as usual a few days before. Her surgeon told me there had been nothing unusual in her labour, and she appeared to go on quite well until the 13th (nine days) when she had a severe shivering fit which lasted more than two hours. Her bowels had been confined; pulse 96, and when I saw her, she had uterine pain, commencing conical abdomen, and diminished lochia. A turpentine stupe was immediately applied over the whole abdomen, and a draught with laudanum and ether taken. At 1.30 she had become very feverish; the pulse had risen to 120; skin very hot. Lochia scanty, pale, and somewhat offensive. Thirst. Headache. Another turpentine stupe was applied, and she took a dose of turpentine and castor oil. At 10 P. M., I found the pulse reduced to 108, and she seemed altogether better. But she was still feverish, and had had no relief

from the bowels. To have diaphoretic mixture every four hours.

14th.—Passed a good night, but had a slight return of shivering this morning, with uterine pain. Bowels only slightly relieved. Lochia quite pale. Was sick twice in the night, and vomited a good deal of bile; tongue furred; pulse 84. Took a dose of turpentine and castor oil in the night, and a dram of turpentine alone, but both returned. Ordered the stupe to be repeated, and another dose of oil and turpentine.

9 P.M.—Vomited again after taking the oil. Pulse 88. Bowels relieved. Is less feverish, and bears pressure better over the uterus. To take a seidlitz powder and effervescing mixture, and to continue the turpentine externally only.

15th.—Slept well in the night, and is much better this morning. Skin moist; tongue cleaner; pulse 84, and neither abdominal pain nor vomiting. Repet. Fetus Terebinth.

16th.—Going on quite well. Pulse 72. No pain.

20th.—Cured.

Case 6.—Mrs. H. was confined on the 4th of June, 1851. Labour natural. On the 7th she was much disturbed by the conduct of one of her servants, and had rather a severe shivering fit. I was called in on the 9th, and found her in the following condition. Skin very hot; tongue furred and inclined to dryness; hurried look and manner. Some uterine tenderness. Lochia scanty. She had taken castor oil, which had acted well on the bowels. Pulse 120, but not with much power. After her first confinement, some years since, she suffered severely from puerperal mania. Or-

dered fever mixture, and turpentine stupes as frequently as they could be borne.

10th.—Abdomen much relieved. Slept pretty well; pulse 120; skin moist. Manner still hurried, hands tremulous. The mixture and stupes to be continued, and a turpentine enema to be administered unless the bowels act well without. I saw her again in the evening, and found her not so well. She had an excitable brain, hot skin, a tendency to delirium, and a pulse at 140. No enema had been given. To take a draught containing m xx Vin. Ant. Tart. and m x Liq. Opii Sed., and half a dram of spirit of turpentine every four hours when awake.

11th.—This morning the pulse was 120, and in the evening 102. She had some rest in the night, and is better. Cont. Terebinth.

12th.—Pulse this morning 88. She is more composed, and has scarcely any abdominal pain. Cont. Rem.

13th.—In all respects better. Pulse 84. Cont.

14th.—Expresses herself as feeling considerably better. Mind quite composed. Pulse 80. Continues to take the turpentine in 5ss doses three times a day without inconvenience. On the 18th she was so well as to require no further attendance.

Case 7.—Mrs. — was confined on the 29th of September, 1851, with her second child. I was called in three hours after labour in consequence of hæmorrhage, which was subdued by removing a large quantity of coagula from the uterus.

Oct. 1st.—Had a rigor last night, followed by headache, rapid pulse, and furred tongue. To-day she has

been delirious, and there is tenderness and swelling of the abdomen. A turpentine stupe has been applied, and she had taken two aperient pills and had an enema. Her pulse is 140, and the skin moist, but neither the secretion of milk nor the lochia at present suppressed. To have an aperient draught, followed by 3j doses of Sp. Terebinth.

2nd.—Pulse 120. Bowels well relieved. Rept. Med.

3rd.—Pulse 96. Abdomen free from pain.

After this she gradually recovered.

Case 8.—Mrs. —, æt. 30 years, was prematurely confined at less than the fifth month of pregnancy, and I was summoned on the 27th of February, 1852, in consequence of severe hæmorrhage, requiring the artificial removal of the placenta. A few days afterwards she had a fetid discharge from the vagina, rapid pulse, considerable depression, painful and tympanitic abdomen, and indeed serious symptoms of purulent absorption; for these she was treated with opiates occasionally, and the free use of turpentine internally in 3j doses, and externally in the form of stupes. She weathered the storm, and had a good recovery.

Case 9.—Mrs. M., æt. 27 years, was confined on the 31st of May, 1852. Natural labour, without any complication. On the fourth day she had a chill, followed by fever and quick pulse. She was troubled with nausea, and a dose of calomel was given, which acted very freely on the bowels. I was requested to see her on the evening of the 9th of June, when I found her slightly delirious, with a countenance expressive of anxiety and fear. Pulse 130 or more, beating

actively, but without much power; tongue clean, but rather dry; abdomen tumid. Said she had no tenderness, but firm pressure on the uterus did occasion pain, and there was some yellow, offensive discharge. Skin rather hot; muscular strength subdued; hysterical movements occasionally. I looked upon it as a dangerous case of puerperal fever; which, without turpentine, would be fatal. In consultation, we agreed to give saline mixture, and a dose of Dover's powder and antimony at night, she having had but little sleep for two nights. Turpentine stupes to the abdomen.

10th.—10 A. M.—Had about four hours' sleep and is more collected, but has quite the aspect which characterizes a low form of puerperal fever. Pulse 140. Still some tenderness over the uterus on firm pressure. To take 5j Sp. Terebinth. every three hours. Turpentine stupes to be continued; milk to be taken frequently. The tongue is drier to-day, and brain somewhat torpid.

10 P. M.—Has been more collected during the day, and the turpentine agrees; has had relief from the bowels; no sickness; tongue dry; urine loaded; skin warm; respiration laboured, and pulse between 130 and 140. Takes milk freely, and there has been some return of milk in the breasts to-day.

11th.—A. M.—Passed a quiet night, without pain or sickness, and slept a good deal. Scarcely any delirium. One motion. Tongue dry, and pulse still very rapid. Milk in the breasts. Took three biscuits and two cups of tea and milk for breakfast. Turpentine to be continued.

10 P. M.—Much the same. Bowels relieved once. Pulse 132. Has taken 5j Sp. Tereb. every three hours.

12th.—10 A. M.—Pulse reduced to 120 and a little

stronger. Tongue less dry. Slept well during the night. Had a large relaxed motion in the night, on account of which an astringent draught was given. Enjoyed her breakfast this morning. Abdomen easy. No delirium. No sickness. Continues the turpentine internally and externally. Complains of soreness in the chest and cough, and has large moist crepitation, for which turpentine was ordered to be applied to the sternum, and some cough syrup internally.

10 P. M.—Has been quite sensible all day, and speaks cheerfully about herself to-night; but her pulse is 130, and there is more heat of skin. Has taken beef tea freely, there is more urine and it is of a better character. Cough a little better. To take the turpentine every five hours.

13th.—10 A. M.—Had a very good night, slept well; took beef tea freely. Bowels once relieved. Urine plentiful and healthy. Cough less troublesome. Pulse 120. Says she is decidedly better and entirely free from pain; but her aspect is depressed, her respiration short, and there is some perspiration. Some fever mixture had been given every four hours, and by some mistake the turpentine omitted; but we now directed the saline to be given only occasionally when she was flushed, and at least two doses of turpentine in the course of the day.

14th.—10 A. M.—Has not had so good a night, although she had some comfortable sleep. Breathing still difficult, with bronchial *râles*, and pulse 132. Abdomen quite free from pain, and soft; tongue moist and clean. No vaginal discharge, indeed, no uterine symptoms. Urine loaded with lithates. Takes beef tea, and bread and milk freely, and has no mental disturbance. It

seemed that the bronchial affection had now more to do with keeping up the rapidity of the pulse than any uterine mischief; and we therefore determined to omit the turpentine, apply a blister to the chest, and give a mixture with Liq. Amm. Acet. and Tr. Calumbœ.

5 P. M.—Rather better. Speaks cheerfully. Is hungry and was much pleased at being allowed an egg in her tea.

15th.—Did not sleep well, and at about five o'clock this morning became more flushed, and her respiration at the same time more impeded from increased bronchial secretion. At 10.30 she had but little heat of skin, but her lungs were much choked with mucus, her cheeks purplish, her pulse feeble and more rapid. Urine very thick. She spoke sensibly and had taken nourishment freely, and there were no symptoms referrible to the uterus. Blister drawn well. She seemed to have had a renewed attack of bronchitis early in the morning. Chest and back to be well rubbed with camphor liniment and turpentine, and to take an ounce of the following mixture every three hours.

R. Potass. Nitrat. ʒss.

Mist. Camph. ʒv.

Sp. Æth. Sulph. ʒiiss.

Tr. Buchu.

Ox. Scillæ à ʒiij M. ft. Mist.

9 P. M.—Countenance less purple; pulse more rapid but not weaker; mind composed; tongue moist; respiration difficult, universal moist crepitation. Cont. Remed. Beef tea.

16th.—Much the same; appears at times to breathe a little more freely; takes nourishment freely. At

night, respiration more impeded, and has slight delirium. Has evidently no chance of recovery.

17th.—Has lived through the night, and is sensible ; but respiration is more laborious, and the right lung as nearly as possible useless. Pulse 144. Tongue moist and clean.

10. P. M.—Has had muttering delirium during the day, and is evidently sinking.

18th.—Has been in a perspiration all night, and the whole surface of the body has become of a purplish colour.

This patient lingered until six o'clock P. M., and affords a remarkable instance of a bad case of puerperal fever, cured as to the puerperal mischief, and the patient sinking under another disease supervening upon an old affection of the lungs ; the bronchitis seizing her at a time when her system, recently in danger from puerperal disease, was in too depressed a condition to fight successfully against the superadded evil. She had for several years been subject to attacks of asthma, but was generally in a tolerably good state of health.

No post-mortem examination was allowed.

Case 10.—Mrs. C. had given birth to a very fine infant about an hour and a half before I was called to see her by her surgeon at three P. M. on the 9th of July 1852. The labour had not been of long duration ; the uterus had not contracted satisfactorily ; she had lost considerably, and the placenta was still adherent, and my assistance was requested to remove it. I found the patient very pallid and faint, but with a distinct pulse ; the bed full of coagula, and the hæmorrhage going on. On examination, I could not feel the placenta with the

finger; but on introducing the hand, through a mass of coagulum, I found the os and cervix contracted, and the placenta to most of its extent firmly adherent to the fundus uteri. The adhesion seemed to be firmer than natural, but could scarcely be said to be morbid; and after a few minutes careful manipulation, I succeeded in removing it, and all hæmorrhage ceased. A dose of ergot and laudanum was given, a bandage applied to the abdomen, and I left the patient after a while with a safe steady pulse. This was her third labour, and no difficulty had occurred in the previous ones.

On the following day (10th) she had a shivering at 10 A.M., followed by sharp fever and a pulse at 140; headache and tenderness of the abdomen, with occasional uterine pains. Haust. Anod. Enema commune. Fetus Terebinth. In the evening less fever; less headache. Rep^t Fetus and Haust. Anod.

11th.—The pains were completely relieved by the opiates, and she got some refreshing sleep. Expresses herself as being quite comfortable to-day. Scarcely any uterine pains and no abdominal tenderness. Complains of thirst and desire for food. Pulse 130. Nervous system quite composed; but the rapid pulse excites apprehension in my mind, although Mr. — thinks the amount of previous hæmorrhage will account for it. Some fever mixture has been given. Lochia scanty, but no offensive smell. Nourishment taken.

12th.—Pulse still much too rapid. In the morning they were for a short time but little above 100, but soon rose again to 130. No abdominal pain; can turn in bed without inconvenience; lochia stopped. Has taken beef tea, milk, a little brandy; thirst still urgent, but tongue clean.

13th.—Another shivering fit this morning, followed by heat and perspiration. Slight offensive discharge from the vagina, and a small piece of putrid membrane on the napkin. Bowels relieved twice. *Slight* wandering. Thirst. Cap^t Sp. Terebinth. ʒj 4 tis horis. Port wine frequently; Quin. Diulph. gj 4 tis horis. Vagina to be washed out with warm water. In the evening she had vomited once or twice, but had no uneasiness either in the head or the abdomen. Tongue moist and clean. Countenance not anxious, but pulse varying from 130 to 140 or more. Takes wine freely, and says she is better. Has also taken a little porter, jelly, and beef tea.

14th.—Vomited twice in the night, and has had two not very relaxed motions. To allay the nausea, she had yesterday four grains of calomel with sugar. Complains of pain in the left arm. Tongue moist, red, and clean. Is quite sensible. Sleeps occasionally; but every now and then the breathing is more laboured, and there is a little wandering. Pulse more than 140, and of less volume. No vaginal discharge. Has taken wine and nourishment freely.

She gradually became more prostrated, and died quite easily at eight P. M., being sensible almost to the last moment.

No examination allowed.

Case 11.—On the 5th of October, 1852, my friend, Mr. —, requested me to visit Mrs. W., aged 29 years, who had been confined eight days, with her fourth child. She was a very delicate woman, of a consumptive family, and had herself a cavity in the right lung. The day after her confinement, she was

attacked with pain in the abdomen and fever, and has been going on unsatisfactorily since. I found her abdomen free from tenderness, but conical and tympanitic; manner excited; pulse 160. Respiration hurried; said she did not think herself very ill; vaginal discharge colourless now, but it has been dark and very offensive. No diarrhœa; vomits sometimes after taking nourishment; had pain in the groin, for which leeches had been applied; delirious at times in the night, and has profuse night sweats. Great muscular prostration. Advised port wine freely; turpentine stupes, and ʒj Sp. Terebinth. every four hours.

6th.—Pulse 130. Abdomen flaccid and no longer prominent; no pain; no delirium; she seemed altogether better, and the treatment was continued. In the evening severe dyspnœa suddenly came on, with great prostration, and soon after 12 o'clock at night she died.

No examination allowed.

Case 12.—Mrs. S., confined ten days ago with her first child. The labour was said to have been severe, and she was delivered with forceps. I was called in on the 3rd of December, 1853, in the evening, and found her in a very unpromising condition; very feeble; pulse 140 or more; slight wandering; offensive lochial discharge; tympanitic and conical abdomen. Pain, on pressure, in both iliac regions; chronic bronchitis. Her bowels were freely relieved, and she had been treated with calomel and opium. The turpentine treatment was now substituted, and a blister applied to the sternum; but on the following day she was attacked with uncontrollable diarrhœa, and survived but a few hours.

Case 13.—July 19th, 1853.—Mrs. A. Primipara. Confined to-day, after a labour of extraordinary difficulty, requiring craniotomy, and described fully under that head. She went on favourably until the evening of the following day, when she began to have lancinating pains in several parts of the abdomen, with fever and sickness. Turpentine fomentations were applied several times during the night. On the 21st, I was requested to see her in the afternoon, and found her abdomen exquisitely tender; her stomach irritable; considerable tympanites (the coils of distended bowel being visible through the integuments); body conical; countenance anxious and expressive of pain. Inability to move or draw a deep breath without pain; but her pulse, although feeble and small, were under 100, and the lochia were going on. There was severe peritonitis, but apparently not much uterine complication. She seemed so low and exhausted that I did not dare to abstract blood; but the abdomen was blistered extensively, and she was ordered a strong opiate draught, and ʒj Sp. Terebinth. every three hours in a little brandy and water.

22nd.—Got some comfortable sleep in the night, and has no pain in the abdomen except when pressed upon, and the tenderness is less than yesterday. Lochial discharge somewhat offensive, and the vagina was directed to be washed out with warm water. Pulse 90; tongue creamy; complains of a little nausea after the turpentine; abdomen still very large and tympanitic. To take the turpentine every four hours, and an opiate at night.

23rd.—Has passed urine freely since the warm vaginal injections, and speaks of them as very comforting. Slept at intervals last night, and has not rejected the

turpentine; but this morning her bowels began to act, and by three in the afternoon she had had six motions. Tympanites diminished and abdomen very little tender. Pulse 90. Tongue cleaner. To take the turpentine every six hours, and an opium pill after each loose motion. Is cheerful and hopeful of recovery.

24th.—Had two more motions yesterday, and one this morning, and has not had occasion to take the opium. Has been able to take the turpentine every six hours; had a comfortable night; no strangury; lochia flowing. Vaginal injections two or three times a day. Abdomen not tender, but still tympanitic and conical, though less so than before. Pulse 90; soft. Lips breaking out, which she attributes to the turpentine, of which she is now to take a dose every eight hours.

31st.—On calling to-day, I found her sitting up at dinner. She had taken the turpentine every eight hours till the morning of the 27th and then left it off in consequence of its irritating the bowels. From this time her recovery was rapid and complete.

Case 14.—Visited Mrs. S. on the 10th of February, 1854, at the request of her surgeon, and found her suffering from inflamed vagina, *putrid discharge*, and *low fever*, after a recent abortion. Uterus closed and apparently empty. Pulse 84, and *feeble*. Uterus not tender, but body generally uneasy, and has at times a “splitting” headache. A clot passed to-day from the vagina, and she had been troubled with occasional hæmorrhage from the uterus. She was advised a mixture containing gallic acid and cinnamon, a turpentine stupe now and then to the abdomen, and to have the vagina frequently washed out with tepid milk and water.

Two days afterwards she was much better. Pulse 72 and firmer; countenance improved; no pain in the abdomen; less vaginal discharge, and that of a better character. Cont. Remed.

In a few days she was quite well.

Case 15.—March 15th, 1854.—Mrs. W., æt. 36, was confined about seventeen days ago with her first child. Labour natural, but tedious. She appeared to be going on quite well until this morning, when she was seized with a severe chill, followed by fever, slight delirium, and very rapid pulse. Her surgeon requested my attendance in the afternoon, when I found her severely ill; restless; wandering. Pulse 150. Tongue furred; skin very hot, and vagina intensely so; some purulent discharge. The lochia had ceased, but the nurse said the napkins had been very offensive. I did not detect any positive uterine tenderness, but we determined to apply turpentine fomentations to the abdomen, and to give ʒij Sp. Tereb. and ʒiij Ol. Ricini without delay, and some fever mixture every four hours.

At night the bowels had acted once freely, and the pulse was 120. Skin perspiring freely.

16th.—Three motions during the night, and pulse down to 96. Perspirations less frequent; head clear; respiration easy, and she is in all respects much relieved.

18th.—To-day I was summoned again on account of a return of her former symptoms, but she was not so severely ill. Pulse 120. Countenance anxious and slightly flushed. No motion since last report; complains of uneasiness in the pelvis, “as if she were going to be unwell.” There is some muco-purulent

discharge from the vagina. To take another dose of turpentine and castor oil.

11 A. M.—Two large motions, the first lumpy. Pulse 96. Countenance pale; feels easier. To take ʒj Sp. Terebinth. twice during the day, and an astringent draught, if required.

19th.—Better this morning. Pulse 90. Bowels quiet. Turpentine to be continued.

20th.—No pain. Pulse 84. One good healthy motion. To go on with the external and internal use of turpentine.

21st.—In all respects better. Pulse 80. Another good relief. The vagina has been washed out frequently with tepid water, and there is now scarcely any discharge. Takes three doses (ʒj) of turpentine in the twenty-four hours without inconvenience, and mild fluid nourishment.

I had no occasion to see this patient again, and in a few days her recovery was complete.

Case 16.—Mrs. W., of middle age, was confined on the 14th of April, 1854, and had a natural labour. On the third day, her medical attendant found a quickened pulse, fever, and offensive lochial discharge; she had had a rigor, but there was scarcely any uterine pain. I visited her in consultation on the 22nd. The evening before there had been some wandering, with a pulse at 130, debility, sleeplessness, and free perspiration. The bowels had been relieved, and the vagina washed out with warm water several times a day. Mr. — gave during the night two doses of ʒss of spirit of turpentine, and a small quantity of acetate of morphia, and

this morning the pulse was only 102; but she had vomited, and the turpentine had been discontinued.

At 4 P. M. I found her slightly incoherent, with a tremulous tongue, pallid countenance, cold feet, slight uterine tenderness on deep pressure; abdomen tympanitic and conical; pulse more than 120; discharge still rather offensive. She had not been sick since the morning, and we gave her 5j Sp. Terebinth. in a wine glassful of brandy and water, recommending the dose to be repeated in four hours if not sick, and the abdomen to be fomented with hot flannels sprinkled with turpentine throughout the night. Vagina to be washed out. Good broth to be given every now and then, but neither opiate nor purgative medicine, from a feeling that the opiate of the night before might have produced the sickness.

23rd.—Had taken the turpentine regularly, and been sick only once. Passed a more comfortable night, and was less incoherent this morning. Pulse still 120. Abdomen less distended; urine passed freely this morning, but none during the night. To continue the turpentine as before.

24th.—A comfortable night, with quiet and refreshing sleep. Mind quite collected; abdomen smaller and softer; pulse 108; discharge slight and scarcely at all offensive. Has taken nourishment well, and continued the turpentine, and there has been no more vomiting. Has difficulty in passing urine in the recumbent posture, and none has been passed for some hours. She is very feeble, but certainly on the whole better. Had some wine yesterday, and is to have some more to-day. Internal and external use of turpentine to be continued.

May 3rd.—Owing to my absence from home, I did

not see this patient again until this morning, when I found her in all respects much better, though weak. The turpentine had been continued in gradually diminished doses until the last two days, when it seemed to be no longer required. The pulse is now about 90; the bowels are acting well; the lochial discharge is more plentiful, but of a perfectly healthy character; the abdomen is no longer conical, but soft and flaccid, and the mental functions are perfectly restored.

Case 17.—Mrs. H., æt. 27. Confined eight days when I saw her on the 3rd of May, 1854. Second pregnancy; labour natural, but rather severe. Had twins at her first labour, which were born without difficulty. She went on well for two or three days, and then was attacked with sharp diarrhœa, which left her only the day before my visit. On that day she was very weak, face flushed, head confused, and experienced some tenderness in the uterine region and inability to pass water, but had not been sick. Her medical attendant feared the approach of some puerperal mischief, and her friends expressed some anxiety, which induced him to propose a consultation. On my visit in the evening, she told me she was better, but her pulse was 100, the skin was perspiring, there was a tendency in the hands and feet to become cold, and some uterine tenderness. The day before, in addition to her other symptoms, the lochia had become scanty and offensive, and her surgeon had very judiciously commenced giving 5ss doses of spirit of turpentine, and applying turpentine stupes, and now there was a more healthy discharge. I advised a continuance of the turpentine treatment, and a little port wine.

From this time she progressed so favourably that I had no occasion to see her again.

Case 18.—December 25th, 1854.—Mrs. F. was confined nineteen days ago, and, with the exception of a little threatening of puerperal disturbance on the third or fourth day, had been going on quite well until the day before yesterday, when she was attacked with pain in the right lumbar and iliac regions, without rigor, and experienced difficulty in getting relief from the bowels. In the course of the day the pain became worse, and she took calomel and opium; had, I think, some leeches applied, and an enema administered, but without decided relief. After a while, however, she had a very large fœcal evacuation, and the abdominal pain was relieved by turpentine stupes. But last evening there was still some tenderness in the abdomen, more *intestinal* apparently than *uterine*; the pulse became more frequent, from 84 to above 100, and early this morning she had a fainting fit. The lochia had ceased before the present attack, and there seemed to be no uterine complication of any moment. At 10 A. M. I found her with a pulse at 120, small, but not wiry; tongue furred and indented. No headache nor delirium—she had had no vomiting from the first. No abdominal pain when quite still; but a good deal of tenderness on pressure both in the situation of the ascending and descending colon; scarcely any in the uterine region. The colon, in its whole course, was distended and tympanitic, so that its outline could be seen through the integuments. There was inability to pass water, but enough secreted and of a good quality. The countenance was not such as to excite much ap-

prehension in my mind. The bowels were unwilling to act, and the surface of the abdomen was a good deal vesicated by the turpentine. It was determined to give ʒiij Ol. Ricini and ʒij Sp. Tereb. directly, and a turpentine enema three hours afterwards; to foment the abdomen frequently; to use the catheter twice in twenty-four hours; and to give good meat broth.

9 P. M.—Has had two liquid stools since the morning of the colour of pea soup, containing no lumpy matter. Has also passed urine once without the catheter. She has kept the medicine down, but vomited some arrow-root taken a little while ago. There is less tenderness in the abdomen. She has had some quiet sleep, but the pulse is very feeble and rather quickened. To take ʒj Sp. Tereb. in almond emulsion and cinnamon water every four hours.

26th.—9 A.M.—Passed a pretty good night, but, although disposed to sleep, was disturbed frequently by griping pains in the abdomen, which she attributed to the medicine, and thought she could distinguish from the other pain she had suffered. Abdomen less tender everywhere, except in the situation of the descending colon and above the left groin. Arch of colon more prominent but less tender, and she feels pain whenever air passes along the bowels; but she has no sensation as if the bowels wanted to act, or that an action would give her ease. Tongue cleaner. Skin moist. Pulse still rapid and indistinct, but not so frequent as last night. (It should be remarked that her pulse is always small and indistinct.) No relief from the bowels in the night. No headache. Slight reappearance of lochia. Has had no chill. Countenance good. Respiration rather hurried, but a full inspiration does not now cause pain.

Has taken three draughts, broth, and some coffee and milk, all of which have kept down. Feels the fomentations cumbersome, and is to have lint sprinkled with laudanum applied instead. To have an enema of castor oil and gruel, and to continue the turpentine draughts.

9 P. M.—Had a good relief from the bowels after the injection, and has been very drowsy from the effect of an opiate enema given afterwards. Skin moist. Abdomen apparently less tender, but she is so much under the influence of the opiate as to be with difficulty roused.

27th.—9 A. M.—The effect of the opiate enema lasted until early this morning, when she awoke feeling more comfortable, but had pain in the left side of the abdomen when air passed along the bowels. No motion. Tongue furred. Pulse 108. No sickness. Turpentine again applied externally to the abdomen. To continue the draughts and have an enema of soap-suds. In the middle of the day Mr. —, the surgeon in attendance upon the case, was summoned in haste on account of a sudden increase in the size of the abdomen, accompanied with pain, and her attendants thought she was dying; but on his arrival he found she had had a plentiful relief from the bowels containing some solid matter, and seemed better.

9 P. M.—General condition improved. Nourishment had been regularly taken. Abdomen vesicated by the turpentine. Pulse 108. Tongue moist. No draught taken since the morning, but to take them again now, and to have another opiate enema if restless. Wine with arrowroot occasionally.

28th.—9 A. M.—A quiet night, without the opiate. Abdomen conical and very tender on the left side and towards the left groin, but not elsewhere. Pulse 108

and not more feeble. Some coloured vaginal discharge. To have another soap enema; to continue the turpentine draughts. Broth or arrowroot every two or three hours, and a little wine and water occasionally.

9 P. M.—Had a plentiful motion in the afternoon, and an immense escape of wind, followed by a diminution of abdominal pain and distension. Goes on with the turpentine draughts without inconvenience. There is now considerable movement of air in the bowels, creating pain when passing through the colon. Says she feels better than she has done since the attack, but does not expect to get well. To have an opiate enema if required.

29th.—9 A. M.—Had a good night without the opiate. A plentiful fluid motion at 2 A. M., attended with immense discharge of air, and another about an hour ago; both healthy, but not containing scybala. Tongue less furred. Pulse 100. Abdomen much less tympanitic, and nowhere tender, except in the situation of the sigmoid flexure, to which turpentine is again ordered to be applied. Only two draughts have been taken since last visit, the patient having slept beyond the proper time for taking it. Complains occasionally of coldness in the chest, but has no fever. Cont. Remed.

9 P. M.—Has passed a very good day. Bowels again relieved naturally, and tympanites almost gone. Tongue cleaner. Pulse 100. Still a little tenderness in both iliac regions.

30th.—9 A. M.—Was restless during the first part of the night and had the opiate enema, after which she slept comfortably and seemed altogether better.

P. M.—Had a soap enema at noon, which was followed by a small motion. Takes the turpentine draughts every five hours, and broth, coffee and milk, and jelly.

31st.—Going on well. To take the draughts every six hours.

Jan. 1st.—Did not sleep well in the early part of the night, but made up for it afterwards, after a plentiful dark-coloured relief from the bowels. Very little abdominal tenderness: passed a clot (recent) from the uterus; lochia natural; milk returning. Cont. Rem.

2nd.—Slept well after having had two motions in the night; had three yesterday, without aperient medicine or injection, consisting of dark brown fluid with some broken up feculent matter and mucus. The abdomen is much more flaccid, but there is a little resistance still in the sigmoid flexure, which leads me to think there is yet some solid fecal matter detained there. Pulse quiet. Tongue clean; countenance cheerful. Says she feels very much better, and now entertains no doubt about getting well. To take the turpentine draughts only twice in the twenty-four hours.

4th.—Found the patient going on comfortably, free from pain. Pulse 84; tongue clean; bowels relieved twice yesterday. Has left off the turpentine internally, but occasionally applies it externally, and always with relief. Indeed, she was so well that no further appointment for consultation was arranged.

Case 19.—Mrs. M., æt. 22, was confined on the 24th of December, 1854 with her first child. Labour rapid and uncomplicated. On the 26th she had a rigor, followed by pain in the body and distension, for which aperients were given, and seventeen leeches applied above the pubes. The bowels acted three times, and the tenderness, which had been extreme, was somewhat relieved by the leeches; but she became worse and I

was called in on the 28th in the evening. I found her in pain, with a rapid feeble pulse, (130) anxious countenance, relaxed skin, and conical tender abdomen, the tenderness being principally in the uterine region and to the left side. There was nausea but no vomiting. Restlessness; anorexia; lochia scanty and offensive. The remedies agreed upon were, the application of blistering fluid to the entire abdomen, warm vaginal ablutions, one-dram doses of Sp. Tereb. with mucilage and peppermint water every four hours, and a turpentine enema in the morning.

29th.—9 A. M.—Was rather better in the night. Pulse 120. Tongue furred; countenance a little improved, and abdomen a little less tender. Urine in fair quantity. Is still very depressed, and a little wandering at times. Abdomen extensively vesicated. Turpentine kept down well. No relief from the bowels, and the enema was very badly administered by the nurse, who is sadly deficient both in knowledge and cleanliness, and unfit to undertake the management of such a case. To continue the turpentine.

9 P. M.—Had a good relief from the bowels this afternoon, partly fluid, partly solid; countenance much improved; the stomach rejected one of the draughts; lochia of a better colour; abdomen less tumid, but still tender. Pulse 120. Tongue cleaner. Cont.

30th.—A. M.—Has been rather hurried this morning; but she has been provided with a better nurse, and is more likely to be properly managed. Pulse 130. Abdomen less tender. Cont. Remed.

9 P. M.—Has passed a more comfortable day and is better this evening. Pulse 120. Less general uneasiness in the abdomen, but uterus tender to the touch;

lochia less offensive; bowels acted once; is in better spirits. To continue the turpentine and to have some applied over the uterine region.

31st.—Had a comfortable night. Cont. In the evening we found her very feeble, pallid, and dejected. Pulse 130. Countenance expressive of pain; nausea; abdomen not more tender, but blistered surface badly dressed, and inflamed in consequence. To continue the turpentine draughts; an opiate at night. Egg and wine.

Jan. 1st, 1855.—Found her much better this morning; cheerful. Pulse 108. A plentiful pultaceous stool; less tenderness; was sick after one of the draughts. Cont.

2nd.—Tried two of the draughts, but could not keep them down; had an opiate again last night and slept well. Pulse 96. Another good motion. Expresses great dislike to the turpentine now, which perhaps is no longer required, as the abdomen is much less tender; blistered surface healthy, but discharging freely. Mild nourishment, and a little wine or porter.

4th.—Going on well. Pulse 84. Abdomen no longer tender or tympanitic; has left off the turpentine since last report, and is taking grain doses of quinine and a little porter.

6th.—Found her so well this morning that I took my leave. The pulse was down to 72 and there seemed nothing beyond weakness to contend with.

Case 20.—Feb. 20th, 1855.—Mrs. ——— æt. 34, was confined with twins a little more than three weeks ago—both children living. This was her second labour, and rather a severe one owing to one of the children being a face presentation. She went on well for a

week ; then had a chill, followed by pain in the left leg, which turned out to be *phlegmasia dolens*. I could not make out that there had been offensive lochial discharge, although there was some doubt about it. The patient was of a delicate constitution, supposed to be phthisical. The milk had disappeared. A day or two ago the *phlegmasia dolens* appeared to be getting well so rapidly as to lead her surgeon to think the cure was too rapid to be safe ; and accordingly she soon became worse in her general health, and I found her this evening in the following alarming condition :—countenance flushed and anxious ; respiration very rapid and irregular, with occasional catches as if from spasm of the diaphragm, whistling and accompanied with some tracheal rattling ; pulse feeble, and 160 or more ; abdomen beginning to be conical from tympanites ; some tenderness over the right ovary, although she owns to but little pain in the body ; no delirium ; very little sleep ; pain in the loins, and great muscular debility ; left foot and ankle œdematous, but not painful. We agreed to give her ʒj Sp. Terebinth. every three or four hours, milk and broth for nourishment, and to apply turpentine stupes to the abdomen frequently.

Feb. 21st.—11.30 A. M.—Countenance less anxious, and pulse down to 130 ; tongue less dry ; no pain now in the loins ; abdomen less distended, and respiration more regular. She has taken 5 drs. of turpentine since last evening, and complains of its feeling very hot in her stomach, but she has not been sick. Has had no relief from the bowels, but expects it soon. Did not sleep much in the night, but was quiet and free from delirium. To have the stupes applied twice in the day, and to take the turpentine every four hours.

22nd.—Has continued the turpentine without much difficulty; the abdomen is now almost entirely free from tenderness and distension, and there is a slight return of lochial discharge. Pulse 130; tongue clean and moist. But she had a restless night on account of pain in the right hypochondrium, interfering with deep inspiration, and there is small crepitation at the base of the right lung. Muscular system still very feeble and tremulous; no headache nor delirium; bowels not relieved. Turpentine to be applied to the right hypochondriac region, and, if necessary, a blister. To have a small dose of castor oil, and a little wine, in addition to the medicine as before.

23rd.—Slept at intervals during the night, and had one relief from the bowels last evening and another this morning. Abdomen natural, but pulse still 130, and breathing short and painful from pleuritic inflammation at the base of the right side of the chest. To continue the turpentine. Empl. Lyttæ lateri dextro. To take nourishment, and a little wine or home-brewed beer, for which she expresses a great desire.

I did not see this patient again, but on the 26th received the following note from her surgeon: "Mrs.— applied the blister, which removed the pain in the side to a certain extent. To-day another blister was applied; there is no material improvement. Pulse 120; colour of complexion not so good; pleuro-pneumonia still going on. There are now no symptoms of puerperal fever; all danger appears to arise from the local (chest) inflammation. She has discontinued the turpentine 48 hours." The chest affection continued in spite of treatment, and of this she soon died. I called as I passed on the day of her death, and found her moribund.

Case 21.—March 15th, 1855.—Mrs. ——— was confined a fortnight ago, after a labour attended with severe hæmorrhage from placenta prævia, requiring the operation of turning. For several days all went on well; then she began to have pain in the region of the uterus, the lochia became offensive, the pulse frequent, and the strength diminished. Believing her to be suffering from puerperal mischief, her surgeon directed turpentine to be given internally, and applied to the abdomen, and put on a blister where the pain was most severe. Finding her very depressed, and unable to continue the turpentine on account of sickness, he requested me to visit her. I found the tongue clean and moist. Pulse 120. Skin not very hot, nor very freely perspiring. No delirium now, although she had wandered a little previously. Abdominal pain much less than it had been, and no tympanites. Bowels open. Lochia offensive and vagina feeling swelled and uncomfortable. I recommended a continuance of the turpentine externally. Two grains of quinine three times a day. Port wine and beef tea. Vagina to be well washed out two or three times a day. I hoped the turpentine had done its work, and controlled the uterine inflammation; but she was in so weak a condition that I entertained doubts of her recovery, in which her surgeon participated to even a greater extent; and I much wished the stomach would have borne more of the medicine.

16th.—Speaks of very great relief having been obtained from the vaginal washing, and says she has no pain in the abdomen. Has had a healthy motion, and is lying upon her side. Gives way occasionally to mental emotion and tears. Skin not relaxed. Tongue quite clean and moist. Room much less offensive.

19th.—Puerperal symptoms at an end as far as the uterus is concerned; the patient is altogether much better, though affected with some diarrhœa and a very great degree of weakness. Abdomen quite flaccid and free from pain.

Shortly after my last visit there was pain in the calf of the leg, and she had a slight attack of phlegmasia dolens, for which turpentine was frequently used as a local application. She, however, gradually gained strength under the tonic treatment, and eventually, after a few weeks, recovered.

ON THE USE OF THE VECTIS.

IN the year 1841, I published a "Report on Midwifery in Private Practice," in the third volume of the *Provincial Medical Journal*, in which I made a few remarks in favour of the use of the vectis in difficult cases of head presentation, having at that time had sufficient experience of it to know it to be a useful instrument. Ten years later, when I edited the "Cases in Midwifery," of the late J. G. Crosse, Esq., I found myself in a position, by a much longer and larger experience, to advocate more strongly the utility of the vectis where mechanical assistance is required for the delivery of an impacted or arrested head. And now again, on reviewing my consultation practice during the last five years, I find the evidence so strong in its favour that I am induced to describe the form of the instrument and the manner of using it, if haply I may be the means of enabling others to obtain the same gratifying results in difficult cases which have fortunately happened to myself. I am fully aware of the difficulty there must always be to convey sufficiently to others, by description alone, the proper way to use any particular instrument; but I have found that such of

my friends as have, from my representations, been induced to make trial of the vectis, have soon been able to convince themselves that it is a very desirable instrument to employ when any is necessary, and that it only requires a little attention and perseverance to enable them to use it with success. If it be inquired, why should those who have been accustomed to the forceps be led to divide their attention between that and another instrument used for similar purposes, I answer that the vectis is available in many instances where forceps would be inadmissible ; and that as it is equally efficient with the forceps in cases where they may be used, its greater range of applicability (to say nothing of the greater facility with which it can be employed) is an argument in favour of its having its proper share of an accoucheur's attention, if not indeed the preference.

The instrument I have been in the habit of using, and which I strongly recommend as being adapted to almost every variety of case requiring its employment, is $4\frac{1}{2}$ inches long in the handle, and $8\frac{1}{2}$ inches in the blade when straight ; but the distance from the handle to the end of the blade when the proper curve has been made is $7\frac{1}{2}$ inches. The fenestra begins at $4\frac{3}{4}$ inches from the handle, and there the blade is flattened, and $1\frac{1}{4}$ inch wide. The fenestra is $\frac{1}{4}$ of an inch wide at its commencement, $1\frac{1}{4}$ inch across its middle, and a little wider than this nearer the end of the instrument, the widest part of the instrument being $2\frac{1}{8}$ inches, and that being about an inch from the end. The flattened iron border surrounding the fenestra is seven-sixteenths of an inch. The shaft of the instrument is round to the distance of $2\frac{1}{4}$ inches from the handle, and is then gra-

dually beveled off to the commencement of the fenestra, where the iron is about three-sixteenths of an inch thick at the inner border, and a little less at its outer margin, both being carefully rounded off. The round part of the shaft is rather more than an inch in circumference.

The advantage of the peculiar curve of this instrument is, that it is sufficient to make it a very effectual and powerful *hook*, and yet it is of a shape that will *fit* almost any part of the child's head; by which I mean that it can be kept in close contact with the head on whatever part it may be thought necessary to apply it; whereas if it were a straiter instrument, it would either slip off the head, or must be used as a *lever* instead of a hook, which I think extremely objectionable; and if the curve were greater or more circular, it would be impossible to get so much of the instrument in close contact with the head: it would not have so much *bearing* upon the head, but would press upon it unequally, and require, therefore, more actual tractile force to obtain the same influence upon the head itself; because, of course, the greater the extent to which the blade is closely applied to the head, the greater mechanical power it will have to move it, and the less danger there will be of the force applied acting injuriously upon any one individual portion of the child's head. Its peculiar length also gives it advantages over many that I have seen, in not being too great to admit of the handle being a fixture: if the handle goes to screw on, it may be rather more convenient for the pocket, but more preparation is required to use it; and should it happen that the handle is by accident left at home (which I have known the case) the instrument might as well have been

left too ; and if, as in many I have seen, the handle has a hinge and button, it does not possess the necessary degree of firmness for satisfactory manipulation ; for any movement or sound produced by the handle interferes with the delicacy of the sense of touch, and might confuse the operator. The instrument I have described is long enough and firm enough for every purpose for which it can be required, and yet not too long to be easy of application. Another advantage it possesses is the width of the blade, both as regards the whole instrument and also the flat margin around the fenestra ; in both respects it is wider than usual, and therefore has a bearing over a larger extent of the child's head, making it less likely to press injuriously upon any particular point. I need scarcely observe that it should be well tempered, so as not to *give*, or alter its curve, during traction.

In almost every notice of the vectis I have been able to find in books, it has met with no small share of abuse, not so much for any positive harm it has done as for being an inefficient and useless instrument ; but the reason for this I have discovered to be, that those who have described it have not understood fully how to employ it, and have based their objections upon false views of its mechanical power and mode of operation. For instance, Baudelocque has written a long article upon the subject in depreciation of the instrument, and describes the manner of using it in a way that proves him to have been entirely ignorant of the principles which ought to guide its employment, of the nature of the mechanical power it ought to be made to exercise, and of the cases for which such an instrument as I describe is appropriate. It has been almost universally described

as a lever of the first order, the child's head being the weight, the mother's pelvis, especially the arch of the pubes, the fulcrum, and the surgeon's hand the power ; a mode of using it which I do not hesitate to say is far from safe, and which in but very few cases would, even if safe, be found successful. The mechanical power of the vectis I use, is that of a hook, so to speak,—that is to say, the blade should be passed so much over the head as to lie principally *behind* the part on which it is destined to act, and the principal moving power is that of *traction* : it is true, however, that simple traction might sometimes, perhaps often, cause some displacement of the instrument ; and therefore something additional is required to keep it in its place, and this is a kind of pressure on the handle which keeps the blade in close proximity with the head without making any part of the mother a fulcrum ; a pressure, in fact, with the hand such as would be used were we attempting to bend the handle backwards upon the shaft or shank of the instrument, and a gradual elevation of the handle as the head descends in the pelvis. In fact, it ought to be used in much the same manner as the surgeon would employ his hand for the same purpose were there room to introduce it.

By such a management of the vectis, the soft parts of the mother have to bear scarcely any more pressure than they must necessarily undergo during the passage of the child's head ; the only difference being the thickness of the blade lying in close contact with the scalp ; and this slight addition to the size of what has to pass through the pelvis is very amply compensated for by the much shorter time the parts have to suffer the pressure upon them. The child's head has, however,

to bear the pressure of the instrument, and is not unfrequently a little marked by it; but this ought never to occur to any serious extent, and I have frequently seen the head more injured by the forceps than I have by the vectis. The occurrence of ruptured perineum during the employment of the vectis is very rare indeed, and the reason is sufficiently obvious; for whatever dilating influence the vectis exercises upon the perineum is made *indirectly* through the medium of the globular head of the child, which is the *natural* mode of dilating it; whereas by using Assalini's forceps, the perineum is often put very much upon the stretch by the handles of the instrument, before it is touched by the head; and this pressure being exerted on two points only of its circumference, it is placed in circumstances the most favourable to rupture, and accordingly it is sometimes thus lacerated. The most essential pre-requisite in using the vectis (and the same may be said of every other instrument employed in midwifery) is a thorough knowledge of the position of the child's head, and of the direction to be given to it in order to facilitate in the greatest degree its expulsion or passage through the pelvis: there is no certain or invariable rule as to what part of the head it should be fixed upon; sometimes it should be the occiput, sometimes the brow, or the mastoid process, or the chin; and this is to be determined by the knowledge of the accoucheur as to the particular direction in which the head will most easily pass. It cannot be too strongly urged upon those who may be called upon to operate in midwifery, to make themselves thoroughly acquainted with the presentations of the head, and so to educate their sense of touch as to be able to determine, with as much certainty as

possible, the points with which the finger during examination comes in contact, as well as the exact position in which the head in each case is placed. This indeed should be accurately made out in *every* case, whether natural or otherwise, for by constant practice it becomes easy ; whereas if common cases are neglected because they are natural and will do well of themselves, and no preciseness of examination is attempted except where obstructions occur, it will be found exceedingly difficult to command, at once, a sufficient degree of tactile discrimination to ascertain with certainty what it will then be so desirable to know. I believe many of the failures attendant upon the use of the vectis arise from want of this precise knowledge of the position of the impacted head ; and without it I feel sure no one can become an adept in the use of the instrument.

The most general circumstance requiring the use of the vectis is that of the head being impacted or arrested in its passage through the pelvis, owing to some disproportion between the head and the pelvis ; but in some cases this disproportion may exist in one direction and not in another : the head may come down in a direction unfavourable to its passage ; whereas, if its position could be altered, there would be sufficient room for it to pass readily, even without the aid of instruments. A very frequent cause of this latter description of impediment (one that, if left to itself, would often entail upon the mother a considerable prolongation of the pain she is doomed to suffer) is a tendency in the child's head to pass into the pelvis with the face inclined towards the pubes ; and this is a state of things that can often be easily rectified by the vectis. Suppose the head descending with the forehead towards the left

obturator foramen, and the occiput towards the right sacro-iliac symphysis, and that in consequence of this position the head is arrested ; then, supposing the pelvis to be of fair size and the above position the only cause of the arrest, the difficulty may be overcome in the following manner : introduce the blade of the vectis in the direction of the sacrum, keeping it in close contact with the head ; and when passed far enough, guide it over the occiput until the prominent part of the back of the head lies in the fenestra of the vectis ; keep the instrument firmly applied in this way, and in the *absence of pain* endeavour gently to carry the blade of the vectis, and with it the occiput, forwards in the direction of the right side of the pelvis ; and, *during a pain*, press upon the anterior part of the head with the fingers of the other hand in such a manner as to prevent the forehead from descending, and to cause the downward pressure to bear upon the occiput. By a little perseverance in these manœuvres, the occiput will be gradually brought towards the right obturator foramen, and come down under the pubes like a natural labour in the second position ; thus saving the mother much suffering and perhaps much time, without the slightest injury either to herself or her child. Another common instance in which a change of position by means of the vectis will facilitate labour, is when the head is engaged in the pelvis with the occiput and forehead on the same plane : by bringing down the occiput with the vectis, we lessen the long diameter of the head by making it oblique, and thus remove the obstacle. Other instances will occur to the experienced practitioner, but it is unnecessary for me to multiply examples. It has been denied by some that the vectis has

any power to alter the position of the child, and this has been brought forward as a serious objection to the instrument; I am, however, quite satisfied of its utility in this respect, and have no fear that others will be disappointed who will put it to the test of experience.

It will be unnecessary, and beyond the limit I have allowed myself in making these remarks, to describe the various conditions of impaction which are known by experience to require the employment of the forceps or vectis; these are amply described in our practical works on midwifery, as well as the method of using the *forceps* in almost every individual case. With respect to the mode in which the vectis should be applied in cases such as these, where not only change of position but actual traction may be necessary in order to effect delivery, a great deal must be left to the individual judgment of the operator; who, if he thoroughly understands what he ought to do, will, in all probability, discover the proper method of doing it. A few general rules will however materially assist those who are unacquainted with the use of the instrument.

In the first place let it be remembered that the vectis is a hook to *pull* with, not a lever to “prise” with. The best general rule for its introduction is to pass it in the direction of the sacrum, as far as it will go easily, keeping it in close contact with the head. Then to insinuate it between the head and the upper side of the pelvis until the blade points, as it were, a few inches above the pubes and the handle backwards,—until in fact the instrument lies almost in the direction of the inlet of the pelvis; then by gently raising the handle and pushing it onwards the blade will be found to pass readily quite behind the head; it will in fact almost *go*

of itself, like a sound skilfully introduced into the urethra; and then, if slight traction be made, it will be found to have a good hold upon that portion of the head immediately opposite to that which presents at the perineum. In making traction, great care must be taken to keep the handle sufficiently elevated, or the instrument will slip; and, on the other hand, it must not be raised too much so as to press injuriously against the soft parts of the mother. If pains be present, traction should be made *only during a pain*; and if absent, a slight degree of traction will often be sufficient to induce them. If we know, as we always ought to know, whereabouts our instrument is fixed, we should keep in mind, during traction, the way in which the head naturally passes most easily through the pelvis, and so regulate our pressure as to favour any natural movement of the head at the same time that we are drawing it down; and even from time to time, in the intervals between the pains, we may readjust the instrument if we think it can be fixed where it will be more likely to favour the delivery of the head. When the head has been brought down low in the pelvis, we may still more assist its delivery and guide it in its natural course by steadying the vectis with the left hand upon the handle, passing the fingers of the right hand on the head opposite the blade, and embracing the shank of the instrument with the thumb of the same hand, by which means we almost surround the head, and can both draw it down and guide it in any direction we please, the instrument being identified with the hand, and performing the part, as it were, of a long thumb.

Those who will take the trouble to read the cases I have reported will discover that not only is the vectis

adapted to cases in which the short forceps are available, but also to such as would otherwise require the long forceps, and even to some in which no forceps could be used. In reference to this last observation I would observe that much caution and tact are required in using the vectis in cases where forceps are inadmissible; and I would strongly recommend that no one should attempt to use it before the uterus is fully dilated, who has not attained considerable facility and confidence in the manipulation of it. But, on the other hand, to deny its employment entirely under such circumstances would be to deprive ourselves of a most valuable resource in certain instances of danger and difficulty, and sometimes to lose an opportunity of saving one or perhaps two lives. I have no hesitation in stating that even where the os uteri is dilated only to the extent that would admit the blade of the instrument, it may in skilful hands be used with safety both to mother and child; and although the occasions for using it under such a condition of uterus must be extremely rare, we do nevertheless once in a while meet with a case where, in the absence of an instrument available at such a period, the only alternative would be perforation, to the great jeopardy of the mother and the certain destruction of the life of the child. Cases 2 and 20 are instances in which the vectis was applied, before complete dilatation of the uterus had taken place, with success, and without any injury whatever either to mother or child.

However much the use of instruments in midwifery is to be deprecated, if they be not used when really necessary, the danger is greater than would accrue from the occasional employment of them when they might

possibly have been avoided. I would be very cautious about advocating the use of them for fear of leading to their abuse ; but at the same time, seeing the great immunity from danger in the adroit use of the vectis, and the vast amount of suffering and difficulty it is capable of overcoming, I cannot think it right to omit the teaching which is necessary to make it available, from any exalted notion of the morality that would abhor it as a dangerous thing. It is useless for any experienced accoucheur to contend that cases never arise in which instrumental aid is indispensable : it would be extremely difficult to prove that those who use instruments least are the most successful in their rate of mortality, or in their immunity from puerperal complication ; or that those who use them most have the greatest reason to take a gloomy retrospect of their obstetric experience. I have undoubtedly witnessed more ill consequences from a neglect of proper instrumental aid than from a timely use of instruments. While therefore we pay all due regard and attention to the axiom that "Meddlesome midwifery is bad," let us at the same time estimate it at its real value, and not allow ourselves to use it as a cloak by which to cover our ignorance and excuse our inefficiency in the use of those appliances, which in all ages have been recognized as occasionally needful for the alleviation of suffering and the preservation of life. We *must* take it for granted that instruments are sometimes indispensable : it *must* be acknowledged that when they are so necessary, it is equally indispensable to understand and be able rightly to employ them ; and I believe that practitioner, who wilfully neglects to make himself acquainted with their proper management, to be far more reprehensible than he whose familiarity and

acquaintance with them has occasionally induced him to lessen suffering by their means, when it could not be said that they were unavoidably demanded for the successful issue of the case.

Of all the instruments employed in midwifery, I believe the vectis to be the safest and most convenient; I have, undoubtedly, also found it to be the most efficient, and possessed of the greatest range of application. I fear I may not have been able to explain with sufficient clearness and perspicuity, either the instrument itself or the method of using it; nothing but personal experience can make it really available; but I trust the few hints I have given may make it easier for those who wish to employ it to learn its mode of application; and I am the more willing to recommend it from an assurance, the result only of experience, that where instrumental aid becomes absolutely necessary, the vectis will not disappoint those who take pains to manage it in a proper and judicious manner.

CASES.

Case 1.—Sept. 28th, 1850.—Summoned to Mrs. S. at 9 P.M., by Mr. —, who had been in attendance eight hours. The patient was 21 years of age, and in labour with her first child. The labour commenced quite early in the morning, and for some time progressed favourably; but as there had been no advance for three hours, and the vagina was getting hot and the patient becoming anxious and exhausted, Mr. — used the vectis, but without success. On my arrival

at 10.30 P. M., I found the presentation natural—a large *caput succedaneum*, uterus quite dilated, perineum not very resisting, and the head firmly impacted. I applied my own vectis, and in less than half an hour delivered her of a living male child.

She recovered without any unfavourable symptom.

Case 2.—Oct. 7th, 1850.—Mrs. M., æt. 29 years. In labour with her fourth child, at the full period. Attended by a midwife from ten last night until nine this morning, when Mr. — was sent for. Labour commenced at 2 A. M. yesterday, and she had been ailing several days before. The pains were good and frequent, but she became exhausted, and Mr. —, finding matters stationary, called me in. Head high in the pelvis. Sacrum very prominent. Os uteri very slow to dilate for want of pressure upon it from behind. No advance having taken place in a few hours, I cautiously introduced the vectis through the os uteri, to bring down the head, and thus aid the pains in dilating the uterus, the anterior lip of which was beginning to swell from being nipped between the head and pubes. In three-quarters of an hour I was enabled to effect the delivery of a large female living child without injury to the uterus. Had I not used the instrument, several hours more must have elapsed, and I was more afraid of *long-continued* pressure on the anterior lip than of the slightly increased pressure upon it for a few minutes, whilst the head was passing through.

Her recovery was rapid and complete.

Case 3.—October 30th, 1850.—Mrs. B., æt. 34. In labour with her second child. Full period. The head

had been impacted in the pelvis six hours, owing to a narrow pubes preventing the proper turn of the occiput, and the large size of the head. I delivered with the vectis soon after I was summoned, by applying it to the left temple and thereby rectifying the position of the head, at the same time that I used gentle extractive force. The child, a male, was born alive, and the mother rapidly recovered. Instruments had been used in her first labour.

Case 4.—Jan. 27th, 1851.—Mrs. —, æt. 30. First labour. Full period. Labour commenced at 11 P.M. by rupture of the membranes and escape of liq. Amnii, and soon after pains, few and far between, followed. At 5 next morning (28th) the head was presenting, the os uteri dilating, pains frequent and severe. Chloroform was administered, a few drops at a time, on a piece of sponge in a handkerchief, during each pain, with great relief to the patient; (five ounces were consumed between five in the morning and two in the afternoon). At 10 A.M. the pains had become very severe; uterus quite dilated; head large and bony, not at all disposed to elongate or overlap at the sutures. At 12, matters were just the same; the head low, but not advancing the least during very strong efforts on the part of the patient. I now applied the vectis; found the head very firmly wedged in the pelvis, but delivered her of a living child at two o'clock P.M. There was some difficulty with the shoulders and also with the hips; and the cord and placenta were the largest I ever saw. The head when born measured $7\frac{1}{2}$ inches in length.

The patient rapidly recovered.

Case 5.—Jan. 29th, 1851.—Mrs. ——— had her first child two years ago, on which occasion her labour lasted five days, and was followed by sloughing of the soft parts and vesico-vaginal fistula.

In this, her second labour, the head was obstructed by a small pelvis, and a very dense band of cicatrix, I supposed, about an inch within the os externum. Mr. ——— had already divided this band at one side of the vagina with a bistoury; but the head did not advance, owing to narrowness of the pubic arch. I was summoned on this account, and overcame the difficulty with the vectis.

The case terminated quite favourably.

Case 6.—April 1st, 1851.—Mrs. M., æt. 28, was confined with her first child in January, 1849, when it was necessary to perform craniotomy. She was taken in this her second labour about the middle of yesterday. Her surgeon remained in the house all night, and visited her frequently at intervals to-day, until about 3 P. M. when he remained with her. The os uteri was dilating last evening, and was fully dilated this morning. Pains frequent and good, and the patient tolerably well. I was sent for at 7 P. M. and found the head in the pelvis, with the right ear behind the pubic arch, but much obstructed by narrowness of the outlet. I applied the vectis, and after some difficulty extracted a fine living infant. The mother had a quick and perfect recovery.

Case 7.—April 15th, 1851.—Mrs. J., æt. 16 years. First pregnancy. Difficult labour, from the large size of the head, which was inclined to present face to pubes,

and a projecting sacrum. Mr. — called me after it had been going on many hours, and I delivered her with the vectis. She soon recovered.

Case 8.—April 28th, 1851.—Mrs. H., æt. 27. A dwarfish woman, only 4 ft. 6 in. high, in labour with her first child. I was sent for on account of difficulty from the small size of the pelvis, which, however, was not deformed, being in proportion with the rest of the body. I delivered her with the vectis; and the child, a male, was born alive.

No delay to recovery afterwards.

Case 9.—June 20th, 1851.—Mrs. B., æt. 30. First labour. Breech presenting obliquely, so that the left anterior sup. spinous process of the ileum formed the presenting part. Head arrested. Placenta expelled from the uterus into the vagina before the head had passed. I delivered the head with the vectis, and the placenta followed immediately. Child, a female, born alive. Uninterrupted recovery.

Case 10.—August 4th, 1851.—Mrs. F., æt. 26. In labour with her first child. Presentation natural. First part of the labour regularly progressive. Last stage extremely painful and tedious. After expecting the head to be born every pain for an hour, I applied the vectis, and immediately delivered her of a fine living boy, with a very elongated head. No rupture of perineum. Placenta natural. Recovered.

Case 11.—August 4th, 1851.—Mrs. C., the mother of several children, and labours always difficult. Had

been in labour many hours, and Mr. — had made several forcible attempts with forceps and vectis without success. She has a small pelvis, and I have been called to her in consultation several times before. Was called at 2 A.M., she having been in severe labour from the previous morning. Delivered her with the vectis in about half an hour after my arrival; child living, but severely injured by the previous attempts at delivery. Right upper eyelid cut through and nearly separated. A wound through the integuments behind the right ear; and an extensive bruise over the prominent part of the right parietal bone. The separated portion of the eyelid was adjusted by means of a suture.

The mother had a rapid recovery, and the child was alive and doing well when I last heard of it.

Case 12.—August 22nd, 1851.—Mrs. —, æt. 28. In labour with her second child. Her first accouchement took place five years ago, and the child was born dead after a severe labour, and I believe craniotomy was performed. She was taken in labour at 10 P.M. yesterday, and her pains were frequent and strong from 8 this morning till 2.30 P.M., when I was summoned in consequence of the head being impacted, and no alteration having taken place for two hours. There seemed no reason for further delay; and I delivered her of a large male living child in about an hour, by means of the vectis. An enormous quantity of meconium passed out of the vagina during the delivery of the placenta; shewing how much pressure there had been upon the child. There was some hæmorrhage after delivery, but the woman had a good recovery.

Case 13.—August 27th, 1851.—Mrs. S. B., in labour with her eighth or ninth child. Has always difficult labours, owing to a narrow pelvis and the large size of her children. The forceps and vectis had both been tried during the night, but the former had not been locked and therefore not actually used. I arrived at about 10 A.M. and delivered her in an hour of a fine male living child. I experienced some difficulty in applying the vectis, but when once rightly placed, it was very effective.

A good recovery.

Case 14.—August 27th, 1851.—Mrs. S., æt. 35. In labour with her first child. She had been ill forty-two hours, and the head was not through the pelvis. I delivered her quickly of a living male child, by means of the vectis. Good recovery.

Case 15.—February 11th, 1852.—Mrs. —, a poor woman in labour with her second child; herself a twin, and of small dimensions. Her first labour was a very bad one, the child being stillborn and delivered by turning. She had been in labour thirty-six or forty hours when Mr. — wished me to be called in. I found the head wedged at the brim, misshapen, face inclining to the pubes; and the pains were diminishing in frequency and power. Pulse 100. General exhaustion. Forceps were inapplicable for the present, the head being high and the os uteri in the way; but I brought down the head nearly to the perineum with the vectis, and then gave it up to Mr. —, to complete delivery with the forceps, he being an adept in the use of that instrument. But after applying them he found

them inefficient, and could make no impression on the head. He then suggested another trial of the vectis, and went home for his craniotomy instruments, leaving me with the case. Meanwhile, I reapplied the vectis, pulled the occiput more down, and then placing the blade over the left brow, delivered her in two pains. The child, a female, was stillborn, with the head very much elongated. No difficulty with the placenta. No hæmorrhage. The woman had a good recovery.

Case 16.—Sep. 11th, 1852.—Mrs. B., æt. 32 years. In labour thirty-six hours, with head wedged in at the brim of the pelvis, with its greater diameter lying from side to side. The pains were very severe, but had scarcely any effect upon the head. The labour began with rupture of the membranes, and the os uteri had dilated very slowly. I found the os uteri quite dilated, and indeed not to be felt. Head not moved by strong pains. Patient beginning to be exhausted, and vagina slightly œdematous. After some difficulty I introduced the vectis over the side of the head and face, and by degrees improved the position of the occiput; in about an hour I succeeded in extracting a fine living boy. Both mother and child did well.

Case 17.—Nov. 15th, 1852.—Mrs. S., in labour with her fifth child. Two had been born alive; two still-born, with funis presentation and unnatural position. This time the funis again presented, and the head was firmly impacted. Mr. — had been in attendance about twenty hours, and for a long time no advance had taken place. The child, of course, was dead, and there would have been no objection to craniotomy on that

score. But I used the vectis, and in about an hour effected delivery. The head was high up, and the pelvis narrow in front. A fine stillborn male child. Good recovery.

Case 18.—Feb. 1st, 1853.—Mrs. —, in labour twelve hours, with head impacted at the brim of the pelvis, owing to a very projecting promontory of sacrum. Mr. — had tried both vectis and forceps, and Mr. — the latter perseveringly. I found the head in a natural position, and with my vectis was lucky enough to deliver her in a few minutes, as if (to quote Mr. —) “by magic.” The child was dead, and had been apparently some time.

Case 19.—Feb. 21st, 1853.—Mrs. Y., in labour with her third child. In her first she was so much injured by instruments that a communication was afterwards established, by sloughing, between the vagina and rectum. In the second, Mr. — delivered her with the forceps. Her present labour (third) commenced at eight yesterday afternoon, and Mr. — had made several attempts to deliver with forceps to-day. At four this afternoon he sent to borrow my vectis, but not being able to apply it effectually he requested my attendance late in the evening. I found the head very high and sticking fast at the inlet of the pelvis—position natural. Uterus fully dilated. There was a large opening in the posterior wall of the vagina, through which fœcal matter passed freely. With some difficulty I fixed my vectis, the head being so high that almost the whole of the handle was in the vagina; and in about ten minutes delivered her of a large female infant in a state of as-

phyxia, but resuscitated after long perseverance in the usual means. The woman had an excellent recovery.

Case 20.—March 25th, 1853.—Mrs. S., æt. 26. In labour with her fourth child, a week or two, it was supposed, before her full time. First labour very severe, and child delivered by craniotomy and amputation of the limbs. The second and third were of more than forty-eight hours' duration, and terminated by instruments. She was this time taken in labour at six P. M., the pains commencing with vigour. Mr. — was with her at seven. At eleven the os uteri was fully dilated, but the head had remained exactly in the same position for three hours, and Mr. —, not thinking the forceps applicable, soon afterwards summoned me. I found the head inclined to present with face to pubes, but I was able with the vectis to place it in a natural position, and quickly brought a living boy into the world. The mother recovered without an unfavourable symptom.

Case 21.—July 17th, 1853.—Mrs. —, in labour with her fourth child. Delay in the passage of the head, owing to the face being towards the pubes.

Delivery was easily accomplished with the vectis, and a living male child born. This was not a difficult case, and would have terminated without artificial aid, but the patient did not bear pain well, and Mr. — thought several hours of labour might be saved by using the vectis, and that without injury. She very quickly recovered.

Case 22.—January 12th, 1854.—Mrs. C., æt. 28 years. In labour with her first child, at full period.

Mr. — had been sent for at six A. M. and remained with the patient until four in the afternoon; at this time he requested my attendance on account of the pains being severe and exhausting, and the head impacted at the brim; the uterus had been very slow in dilating because the head was not pressed down upon it. I arrived at five P. M., and thought I could introduce my vectis through the os uteri and gently assist the head downwards; and as the patient was beginning to have unfavourable symptoms, rapid pulse, restlessness, apprehension, Mr. — concurred with me that some artificial assistance ought to be rendered as soon as possible. I therefore applied the vectis, and by gentle traction during pains, succeeded in about an hour in delivering her of a fine living male infant. The os uteri was about two-thirds dilated when I introduced the vectis, and readily gave way when the pressure of the head was brought to bear upon it. Placenta followed naturally. There was considerable soreness, and some free hæmorrhage afterwards; but we left her at eight P. M. in a very comfortable and satisfactory condition. She had no unfavourable symptom.

Case 23.—Feb. 19th, 1854.— —, an unmarried female, æt. 21. First child. Taken in labour, at her full period, on the 17th. Liq. Amnii escaped in the middle of the day on the 18th. Good pains during the night and until ten this morning, when she became a good deal exhausted and the labour pains ceased. At this time the head was in the pelvis, and os uteri dilated and out of reach. At about three P. M. further relief seemed indispensable, and Mr. — attempted to deliver with the vectis, but without success. The soft

parts became very tender, and she was so impatient for delivery, that at eight P. M. I was requested to visit her. I found her very fidgetty and apprehensive, disliking any examination on account of the painful state of the parts, which were swollen and dry. The head was wedged in the pelvis in a natural position, almost upon the perineum, and pretty much the same, I was told, as it had been ever since ten o'clock in the morning. Towards the pubes on the right side I discovered a large rent in the vagina, so that the parts in the situation of the ramus and obturator foramen were minus their vaginal covering. I pointed this out to Mr. —, and as the manipulations had brought on a slight return of labour pains, I advised giving her another hour or so, in order to avoid, if possible, the use of instruments, and give time for the perineum more fully to dilate; besides, the pulse was neither very weak nor very rapid; and I hoped if pains returned she might ere long get through. I then left, and visited her again at half-past ten, having received no message in the mean time to say it was over. I then found the head in the same position, but the perineum a little more relaxed; and as the pains seemed quite insufficient to expel the head, I applied the vectis, and in a few minutes delivered her of a large female child which appeared to have been dead some time. The placenta was expelled naturally, without hæmorrhage; and I then again examined the rent in the vagina which I found to be of some considerable extent.

The next morning I heard she was going on well. I heard no more about her until the 7th of March, when I was requested to see her on account of severe hæmorrhage, which came on the day before. There had been

but little lochial discharge, and the uterus seemed well contracted; and I could not satisfactorily determine whether the loss came from the uterus, or from the lacerated vagina. She was very pallid, and her pulse extremely feeble. She had not been able to pass water since her labour, and the catheter had been used twice a day. She was ordered to take cold milk, and five grains of Gallic acid every three hours; and to have cold applied assiduously to the vagina. These means proved effectual in restraining the hæmorrhage. After a few weeks she became able to pass urine, all discharge from the vagina ceased, and at last she completely recovered.

Case 24.—August 21st, 1854.—Mrs. ——— æt. 30. In labour with her third child. Small pelvis and projecting promontory of the sacrum. She had been in labour forty-eight hours, and no advance had taken place in the last twelve. I found the head wedged in at the brim, the cranial bones overlapping. Mr. ——— considered it too high for forceps, and at his request I delivered her with the vectis in about an hour. The child, a male, was living and uninjured. Severe hæmorrhage occurred about a quarter of an hour after the placenta was expelled, the uterus alternately contracting and relaxing, as if too exhausted to remain in a state of contraction. This was arrested by cold applications and two or three doses of Tr. Opii, and we left her in about two hours in a satisfactory condition. She soon recovered.

Case 1.	....	Mother recovered	...	Child lived.
2.	....	do.	....	do.
3.	....	do.	....	do.
4.	....	do.	....	do.
5.	....	do.	....	do.
6.	....	do.	....	do.
7.	....	do.	....	do.
8.	....	do.	....	do.
9.	....	do.	....	do.
10.	....	do.	....	do.
11.	....	do.	....	do.
12.	....	do.	....	do.
13.	....	do.	....	do.
14.	....	do.	....	do.
15.	....	do.	....	Stillborn
16.	....	do.	....	Alive
17.	....	do.	....	Stillborn
18.	....	do.	....	do.
19.	....	do.	....	Alive
20.	....	do.	....	do.
21.	....	do.	....	do.
22.	....	do.	....	do.
23.	....	do.	....	Stillborn
24.	....	do.	....	Alive.

ON THE INDUCTION OF PREMATURE LABOUR.

Under this head I introduce the cases of two patients, in whom premature labour was induced by a method not usually adopted, but which appears to have several points to recommend it. The first patient had been a great sufferer, but in spite of this was also very prolific, never remaining long after one confinement before she became pregnant again. The anticipation of her labour was dreadful to her, and without the con-

solation to be derived from the prospect of her child being born alive. Her two last children, however, were born alive, and the cases afford additional testimony in favour of the vectis. The second patient also experienced great dread of her confinements, and deplored very intensely the apparent impossibility of giving birth to a living child; indeed her mortification at this disappointment was only to be equalled by the gratification and thankfulness she expressed when she found at last that the dread necessity for destroying her children no longer remained, and that she was called upon to perform those duties which, as a mother, she had longed to bring into real existence. The particular mode adopted in these instances to bring on premature labour, arose out of the difficulty experienced in the first in attempting to rupture the membranes; the uterus was so high that it was difficult to direct an instrument into it by the finger, and when the tube was passed in, it could not be made to rupture the membranes. The issue however proved that this was not necessary, and afterwards it was not attempted; for if the passing an œsophagus bougie or tube a distance into the uterus between its inner wall and the chorion will so disturb the pregnancy as to induce labour, there is a very manifest advantage in resorting to this plan in preference to rupturing the membranes. In the first place, it is easy to accomplish, and not painful to the patient; and when labour does come on, it cannot be doubted that the membranes being entire during the first stage, materially facilitates the progress of delivery, and contributes in no slight degree to the safety and preservation of the child; more so, perhaps, in these particular cases than in natural labours at the full period, for here there is generally

some deformity of the pelvis making delivery even at the seventh month sufficiently difficult to require every aid that can be afforded by the natural mechanism of parturition. In every labour it *must* be very desirable to have the membranes unruptured during the early stages; and these cases prove the possibility of preserving them entire even when we are called upon to bring on delivery before the natural termination of pregnancy; they are, however, too few in number to be admitted as conclusive evidence of the general success of the plan adopted, but they may be thought sufficiently decisive of the question to induce others to put it to the test; and should it be found generally applicable and successful, I apprehend it will also be very generally preferred to those which have been hitherto employed.

CASES.

Case 1.—March 5th, 1851.—Mrs. B., æt. 36 years. The patient, it is estimated, is gone seven months and a week in her fifth pregnancy, and in consequence of her last three labours having proved destructive to the children from want of pelvic space, and the first, although a small child, requiring the use of the forceps, I met my friend Mr. ——— for the purpose of inducing premature labour. We found the external parts relaxed but very tender, and the pelvic arch too small to admit of the introduction of the hand. The os uteri was too high up to be reached satisfactorily by the finger; I could however just reach it with my middle finger, and introduced through it a flexible metallic bougie some way

into the uterus, but without rupturing the membranes; so that it probably passed between them and the uterus, and it gave no pain in its introduction. We then agreed to wait awhile for the result of this proceeding, prescribing castor oil, rest, and warm fomentations to the external parts.

6th.—Our proceedings yesterday were followed by no result, and to-day, with the aid of a speculum, I introduced a stomach pump tube easily several inches into the uterus, but could not rupture the membranes; it must, however, have separated them considerably from one side at least of the uterus, and we thought this might be sufficient to induce uterine contraction.

March 10th.—She has had a little pain at times each day since the 6th; but early this morning labour pains set in in good earnest. At about 2 P.M. Mr. — saw her, and found the os uteri dilating; at six he was again summoned, and found the os quite dilated, the *Liq. Amnii* escaping at intervals as if the membranes were ruptured high up; the pains were very severe and frequent, and the head was pressing upon the brim of the pelvis. Finding no progress made in three hours with severe and forcing pains, he administered small quantities of chloroform, and sent for me at nine o'clock in the evening. The os uteri and other soft parts were in a favourable state for delivery; but the head was very high up, and covered by the membranes, which I ruptured, giving rise to a small escape of *Liq. Amnii*. With some difficulty I applied the vectis, by means of which I assisted the head into the pelvis, and, in about an hour, brought a living male child into the world, the labour having been very severe and difficult, owing to the small size of the pelvis. The child did not appear

very active, and its forehead was marked by the vectis ; but we congratulated ourselves in not having delayed inducing labour until a later period of pregnancy ; for we felt that even another week's growth might have rendered it impossible to have saved the child.

Both mother and child went on well.

On the 6th of January, 1853, Mrs. B. being again pregnant, I accompanied Mr. — for the purpose of again bringing on premature delivery, and pursued the same plan as before ; that is to say, we introduced the round end of a stomach pump tube seven or eight inches into the uterus, separating the membranes from the uterus to that extent without rupturing them. A few drops of bloody fluid escaped, but the introduction of the tube gave no pain. The vagina, as before, was extremely sensitive and painful under the use of the speculum, and the os uteri too much out of reach for convenient manipulation. Up to the 9th, no symptoms of labour had occurred, with the exception of there having passed on that day a little coloured discharge ; and at Mr. —'s request, I then introduced the tube again, and moved it about freely in the uterus, without occasioning pain.

15th.—No pain having yet occurred, the tube was again introduced to-day.

16th.—Still no symptoms of labour. A firmer tube, bent near its middle, was introduced to-day, and turned round in the uterus so as to describe a circle three inches in diameter.

28th.—Labour not yet brought on, but she thinks she has some symptoms of its approach to-day. Tried to introduce the tube again to-day, but could not do so

freely, owing, I believe, to its impinging upon some portion of the child; we therefore injected some warm water through it, hoping by this means to separate the membranes from the uterus to a greater extent.

February 20th.—The patient had some uterine pain and slight indications of the approach of labour for a day or two after last report, but they went off again; and as the parts had become exceedingly tender, and there was reason to fear we might excite inflammation of the uterus, we thought it right not to renew our efforts to induce labour at present.

March 6th.—Summoned by Mr. — at two o'clock this morning. The patient had been in strong labour since nine the previous evening, and the head was still high up, having scarcely entered the pelvis. The membranes had not ruptured, but the uterus was fully dilated, and the soft parts were in a favourable state for delivery. The head presented with the anterior fontanelle towards the left ramus of the pubes. I passed the vectis over the occiput so as to get a purchase upon it by engaging it in the fenestra, and, by a little perseverance, turned the occiput towards the right ramus of the pubes, the head not being yet wedged into the pelvis. I then got the blade of the vectis over the child's right lower jaw near its angle, and, within an hour, succeeded in bringing into the world a small, living, uninjured boy. The labour was very painful, and the patient distressingly vociferous, notwithstanding the frequent administration of small quantities of chloroform. The placenta came away naturally, and we left her in a good state.

Both mother and child lived.

In this case, although we did not succeed in inducing labour at the time we desired, it appeared that our interference did in some way retard the growth of the child, which at the time of its birth was very much smaller than usual at the same period of pregnancy.

Case 2.—June 17th, 1854.—Mrs. —, æt. 29 years, having lost her three previous children owing to want of pelvic space, was recommended to submit to the induction of premature labour in this her next pregnancy. She is now seven months gone, and at the request of my friend, Mr. —, I to-day introduced an œsophagus bougie into the uterus, and passed it up nearly its whole length without rupturing the membranes.

18th.—Tube introduced again to-day.

19th.—I again introduced the tube, and advised waiting a few days to see the effect of what had been done. The introduction of the tube hitherto had neither given pain nor ruptured the membranes; but, to-day, I observed a nervous irritable condition of the patient, which led me to think uterine action would ere long ensue. Towards night she became uneasy; the following day she had slight pains, and at nine o'clock in the evening of the 21st the waters broke, and at 11.30 a living female child was born without other assistance than what the midwife could afford.

She was doing well the next day, and had a very good recovery.

July, 1855.—This patient being now again in the seventh month of pregnancy, Mr. — resorted to the

same means of inducing labour. He introduced an œsophagus tube on two successive days, and then once again after one day's interval. Labour commenced a few hours after this third introduction; and, to the great delight of the mother, another living child was born after a natural though somewhat painful labour.

PUERPERAL CONVULSIONS.

THIS is a disease which, to an inexperienced practitioner, assumes a more unpromising appearance than almost any other in the department of Midwifery; the symptoms being so threatening and the aspect of the patient so distressing, that it would seem almost impossible for recovery to take place. Yet we find by experience that, if judiciously treated, many cases get well; and that, in spite of the frightful disturbance to the nervous system and the apparent suffering of the patient, she is unconscious of what is passing, and on recovery has no recollection of what has previously excited so much apprehension and alarm in the minds of her attendants and friends. As far as my own experience goes, there is for the most part an absence of any serious organic lesion; and even death may occur without a post-mortem examination discovering any very marked pathological condition. No doubt these circumstances render it a disease favourable to medical treatment; and the great practical lesson to be learnt from it is, that we must not allow ourselves to be led into too great activity of treatment from the idea that, with symptoms apparently so severe, we not only have

no time to lose, but are bound to make use of appliances of equal power and activity with the symptoms they are to combat. When we have acute inflammations to treat, which, if neglected, would rapidly run on to destroy the texture of an important organ, we cannot be too energetic in our endeavours to subdue them; but this does not apply in an equal degree to puerperal convulsions; for in these cases organic changes are of less frequent occurrence, however severe and threatening the external phenomena; and too great a reliance upon powerful remedies unsparingly employed may not unfrequently be found to have complicated the disease, and bring on difficulties of another description not more under command, nor less dangerous to the patient. For instance, there can be little doubt of the general propriety of venesection in this disease; but if carried to too great an extent, a sudden exhaustion may be produced of a most alarming character; or we may have to encounter a state of mental derangement, exciting fears lest it should, from its severity or long duration, induce permanent mania or imbecility.

It has been said that, in most instances, an observant practitioner will be able to detect symptoms in a patient, previous to delivery, indicative of a liability to convulsions during labour, and to some extent this may be the case; but however much easier prevention may be than cure, I fear we shall rarely be able so to prejudge a case as to be sure that an attack would have occurred had not the precaution we had taken been observed. One of the most common premonitory symptoms is headache; and, sometimes, oppression of the stomach seems to be a cause; and when we know these to be in existence previously to labour, we ought, undoubtedly,

to correct them. But distress of mind and depression of spirits are more potent causes, and often beyond the control of the medical adviser. Another very frequent cause appears to be a general congestion of the system, accompanied with albuminous urine; and this again can scarcely be effectually relieved by anything short of delivery. So that after all, we shall generally have to encounter the disease itself rather than be called upon to treat its premonitory symptoms; and our chief consolation will be that, however much appearances may contradict the assertion, time will be afforded by the disease for the administration of suitable remedial means. What these should be must, in some measure, be determined by each individual case; but I would place in the first rank *venesection*, at all events to the extent of relieving signs of external congestion, should these be present. After *venesection*, I believe *opium* to be the best remedy; and it is not unusual for patients to awake almost well after a long sleep. Neither the degree of stertor nor the length of time a state of unconsciousness remains, are of so much importance in this as in many other diseases; and they are not indicative of great danger unless the respiration becomes unusually *slow* as well as loud, and we find it impossible to lessen the insensibility in any degree by attempts to rouse the patient. In some cases the inhalation of chloroform is very beneficial in subduing the convulsive movements and preventing exhaustion; and in others, the only way of putting a stop to the convulsions is to put a termination as soon as possible to the labour.

The cases I have appended are five in number, of which four recovered; and they are all of a sufficiently serious description to be interesting to those who have

not had opportunities of becoming familiar with this form of disease.

In Case 1,	....	Mother recovered	....	Child born alive
2,	....	„ died	....	„ do.
3,	....	„ recovered	....	„ do.
4,	....	„ do.	....	„ stillborn
5,	....	„ do.	....	„ do.

CASES.

Case 1.—Feb. 21st, 1848.—Mrs. — æt. 28. Subject to frequent headaches and confusion of thought at times for two or three years; and during the last few weeks, pain in the head has been more frequent and severe. Taken in labour with her fourth child early this morning. At 6 A.M., she had a convulsion, and Mr. — was sent for, the convulsions having recurred several times before he arrived. After bleeding her freely twice, the labour terminated, and had not at any time been severe. When the child, a healthy living male, was born, she recovered consciousness so as to be able to speak to those around her; but she was confused, and complained much of her head; shortly after, she had another convulsion, for which Mr. — bled her again and gave gr. viij of calomel. She did not, however, now recover her senses, and on a repetition of the convulsions, I was requested to attend. I arrived at 11 A.M.; Mr. — had bled her five times and drawn a large quantity of blood; but the convulsions were frequently recurring, and he was afraid to carry bleeding further. She was quite insensible, and at times breathing

with a fearful stertor. Body quite warm; pulse hard and strong; pupils contracted; frothing at the mouth; muscular tremor. In the night, before convulsions came on, she had vomited a large quantity of green fluid. I advised another bleeding, and about 3xij were drawn. An enema of castor oil and turpentine. Mustard cataplasms to the legs and epigastrium. Cold applications to the head; hartshorn to the nostrils. After this, there was an interval of an hour without a convulsion; then she had another convulsion, and another, and again she was bled to about a pint. We then gave Sp. Amm. Arom. and Tr. Opii à mxxv. The pulse was much softer though more frequent; and the bleeding appeared at once to put a stop to the convulsion that was present when the blood began to flow; it lasted not a minute after the vein was opened. We also gave another turpentine injection with 5ss. Tr. Opii. in it; her lips had become pallid, but her skin was warm and her breathing quiet and regular; she seemed to fall into a quiet sleep, in which state she remained until I left her, having had no convulsion for three hours. She occasionally moaned as if from after-pains, and she could move her limbs; she also opened her eyes occasionally, but could not be roused to speak. I left her with the hope that her present calm and quiet condition would terminate in a return of consciousness, as her pulse did not at all falter and her respiration was tranquil. During her illness she had been bled seven times, averaging from 10 to 16 ounces of blood each time; yet the pulse was regular, about 120, the lungs unembarrassed, the skin warm, and no approach to syncope.

22nd.—I was informed to-day that she remained in the same tranquil state as when I left her until 4 o'clock

this morning, when she awoke with consciousness, and took some milk broth. The bowels had not acted, and she was still drowsy, having had no recollection of her labour, and not believing the child she saw was her own. She was easily roused to answer questions, but then turned round and dozed again. Took some senna and salts.

On the 26th I heard she was going on favourably; her intellect clouded, and her only complaint being of pain in the head. The bowels had acted freely, and she took fluid nourishment without difficulty. Small doses of Sp. Am. c. in Inf. Gent. were given frequently.

March 3rd.—All uncomfortable symptoms have now vanished, and she is rapidly getting well.

Case 2.—January 4th, 1851.—Summoned at 11 P.M. to the following remarkable case. The patient, aged 23 years, was pregnant, and had taken lodgings for her confinement, which she daily expected. There was a good deal of mystery about her marriage, and it seemed doubtful whether or not she was married; at all events it was a secret, and she had been living with her mother until within a few days, when she removed to lodgings for the purpose above mentioned. She had been much depressed in spirits, and full of grief the day before and this morning, in consequence of disappointment at being deprived of an interview which she expected. She was a fine, good-looking woman, in good general health, and respectably connected. After much fretting, at about 5 P.M. she suddenly threw herself upon a sofa, and could not be made to recognize any body or to answer questions. She soon afterwards became convulsed and breathed badly, but it was supposed to be an hysterical attack, and

but little notice was taken of it. Then convulsions occurred again, she was twice very sick, and remained unconscious. At 9 P. M. her surgeon was called and found her quite insensible, with stertorous breathing. Looking upon the case as a very serious one, he summoned me to his assistance at eleven. She was then in profound apoplexy, feet cold, pulse small, totally unable to swallow, pupils dilated and fixed, and could not be roused. A large mustard poultice was applied to the epigastric region, and an enema of castor oil and turpentine administered. The breathing now became more stertorous at intervals, and on removing the mustard plaster we observed that contractions of the uterus corresponded with those intervals. Hoping therefore that, although the apoplectic attack preceded the commencement of labour pains, it might depend somewhat upon uterine irritation, a few ounces of blood were taken from the arm, and the uterus examined *per vaginam*; when we discovered a moist relaxed state of the genitals, the cervix uteri nearly obliterated, and the os just beginning to open. The head presented, and was forced down a little during the pains. After waiting some time, during which the breathing became more impeded and difficult, exciting in us the greatest apprehension about her life, we ascertained by the stethoscope that the child was living; and determined to effect delivery as soon as possible, for the purpose of saving the child, and giving the mother the chance, bad as it was, of having the uterus emptied. It was evident, however, that this could not be accomplished except by artificial means, and that by waiting, both lives must be lost. With the concurrence of Mr. — I therefore gradually dilated the os uteri, introduced my hand, turned the child, and

effected delivery. The child was stillborn; but after attempting for three-quarters of an hour to restore animation, respiration was at last established, and the child, a female, saved. No loss attended the delivery. The child was born at about 3.15 A.M. on the 5th; the mother continued to get worse, the stertor being loud, constant, irregular; and there had been no consciousness since the commencement of the attack at five the previous evening. Soon afterwards the stertor was accompanied with a peculiar convulsive noise, which I have never heard but as the harbinger of death; but as her pulse was strong, we tried, as a last resource, a second bleeding; during which the pulse became freer, the hands and cheeks warmer, and the heart acted with more vigour; but it made no impression upon the sensorium, nor gave any relief to respiration; and very soon after, about four o'clock, she ceased to breathe, the heart acting well and the pulse beating very distinctly more than a quarter of an hour afterwards; then the beats became imperceptible, her face turned cold, and every sign of life disappeared. I regret very much that a post-mortem examination was not permitted.

Case 3.—May 27th, 1852.—A strong healthy-looking unmarried woman, æt. 19 years, confined at 6 o'clock this morning. Primipara. Labour natural and not severe. Was attacked with convulsions at noon, which recurred at short intervals. Between the first two or three attacks she regained her consciousness, but not afterwards; and the intervals became of short duration. I was called to her at midnight, and she had two severe convulsions in a quarter of an hour. I persuaded Mr. — to bleed her, for her pulse was strong, her countenance flushed,

and her hands and arms red and hot. About a pint and half of blood was drawn, after which she breathed more easily, and had not another convulsion for an hour; she appeared also a little more conscious of her sufferings. She had two more convulsions between this and four in the morning, after which they ceased, and she gradually regained consciousness. I heard the next day she was going on well, and she soon recovered.

Before I saw this patient, Mr. — had given two doses of opium, and expressed great doubt as to the beneficial effects of bleeding in convulsions after labour. My own impression was, that the bleeding had much to do with her recovery, considering the very manifest signs of cerebral congestion and general plethora under which she laboured.

Case 4.—April 22nd, 1853.—Mrs. —, æt. 24 years, a highly sensitive lady, of refined mind, and not very strong constitution. Taken in labour with her first child yesterday morning. Breech presentation. Had been in good health during pregnancy, until the last week or two, when she had complained of headaches, but did not think it worth while to consult her medical man. Indeed she had scarcely had an interview with him until the time he was summoned to her labour, from a dislike to enter upon any conversation with him relative to her pregnancy. She was over-sensitive about such matters, of a nervous temperament, generally cheerful, and accustomed to substantial diet. In the evening a severe convulsion came on, with extreme congestion of the head, evidenced by blood escaping from the mouth and nose. She was then largely bled. After a while another fit came on, and she was bled again.

Then another fit, and a third bleeding; and about this period, her delivery was with some difficulty accomplished, which it was hoped would put an end to the convulsions. But she remained in a semi-conscious state; and after the placenta came away, she became again convulsed, and this time leeches were applied to the temples, the hair was cut off, cold applied to the head, ten grains of calomel administered by the mouth, and an enema of turpentine. But, notwithstanding all this, she had another convulsion at three o'clock this morning, became totally unconscious, had scarcely a pulse, countenance bloodless, and was supposed to be in a hopeless condition. Her bowels had been relieved by the injection. It was clear that no further depletion was admissible, and the only thing was to give her some mild nourishment and await the result. She swallowed some milk broth several times, and appeared more composed. Mustard poultices and warm flannels were applied to the feet and legs. Three hours passed without a convulsion, and hope revived; but at 7.30 she had another, though less severe than before; and, in despair, I was summoned by telegraph. Meanwhile, more nourishment was given, she appeared to be frequently sleeping, and became gradually more and more conscious in the intervals. I arrived at 2 P.M. and found her sleeping; but on awaking she noticed that I was a stranger, and her face became flushed. She then knew her husband and the surgeon who attended her, answered me several questions, said she had no pain in her head or elsewhere, and could tell me what was o'clock by my watch. Pulse 150 and small. Tongue bloody and very much bitten. Had passed urine twice. We left the room as soon as possible, and she went to

sleep again. There had been no convulsion since 7·30 A. M. I waited until 5·30 P. M. and still no convulsion ; and when I took my leave, her pulse was a little more restored, her countenance had improved, and she was quite conscious. I advised but little interference except by giving nourishment ; and in case of a return of convulsion (which after so long an interval I did not anticipate) an enema containing ʒj of laudanum in gruel.

This patient went on favourably, without any return of convulsion or loss of consciousness, until Tuesday the 26th, when she became hysterical, apparently from then, for the first time, being able to realize the loss of her child, which had been stillborn. After the hysterical fit she became somewhat wild, and then quite maniacal ; this continued several days, accompanied with great exhaustion, feeble and sometimes intermitting pulse ; and on the morning of the 30th she became so alarmingly exhausted that I was again summoned ; her surgeon fearing, however, that she would die before I could arrive. But at about 3 P. M. I found she had taken nourishment, milk and eggs, very freely, and her pulse had rallied a little. She had been taking also a grain of Acet. Morph. in solution every two hours, and the bowels had been relieved. The lochial discharge had gone on the usual time, and had now ceased ; but the nurse stated there had been a disagreeable smell, and that the urine was offensive also. On my arrival she had a very rapid pulse (150) and was quite deranged ; skin warm, and face a little flushed ; the pulse was stronger than it had been ; indeed, strong enough provided it had been less frequent ; but during her fits of raving it became weaker, and during her short sleeps, slower (120) and stronger. She passed

urine freely in the bed. Under the influence of the morphia she dosed occasionally, but always awoke as deranged as ever. I stayed with her all night, and by giving her an opiate enema and frequent doses of Acet. of Morphia (one grain at a time in solution, to the extent of eleven grains in the night) kept her more quiet than she had been the two previous nights. She had several attacks of opisthotonos in the night: in the morning we gave an enema of gruel and castor oil, which brought away some fœcal matter and flatus; but the irritation of it seemed to increase her delirium, and she was exceedingly wild all the morning, with such an unfavourable expression of countenance that I feared there was but little chance of recovery. In the night, I had combined one-eighth of a grain of tartarized antimony with several doses of the morphia, but no sickness or nausea resulted from it; at about noon, however, she perspired very freely, without loss of temperature in the body or limbs. At about 2 P. M. finding her still raving, and that she refused all nourishment, spitting it out of her mouth, and behaving with all the cunning of a maniac, I administered some chloroform on a piece of linen several times, and it seemed to quiet her; we then left the room, and she soon fell asleep and slept quietly for an hour and a half, during which time her pulse was of fair strength and 120. She awoke just before I was obliged to leave; shook hands with me, and showed me her tongue when asked to do so; but soon again looked wild, ceased to take notice of questions, but was not as on former occasions vociferous. The chloroform had certainly somewhat improved her condition. I did not use enough to produce sleep, but she had sufficient to quiet the nervous system and allow the morphia to

produce more effect ; and we agreed, in case of a return of the mania, to resort to it again in preference to a larger quantity of opium.

On the 3rd of May, I received the following communication from her surgeon, dated the 2nd. “Dear Sir, Shortly after you left yesterday, Mrs. ——— again became very much excited. I gave her in the evening the morphine drops (gr. j doses) every hour, and about one o’clock she went to sleep and was perfectly quiet until eight or nine in the morning. I still continued to give her the drops, and when I saw her at 1.30 to-day, she was in a sound sleep, and had also slept an hour and half earlier in the morning. In all other respects she had been the same as when you saw her. The pulse continues about 140 to 120—perhaps she has taken more nourishment. I should not be surprised if she did struggle through. I wish the frequency of the pulse would diminish, and I should then have great hope.”

On the 4th, I received the following from the husband. “I have delayed writing to you until to-day, with the hope of being able to give a more favourable report of Mrs. ———, but all I hear from Mr. ——— is that she is much the same, with the negative advantage of having been more quiet since yesterday morning. Pulse still quick. This morning diarrhœa came on violently for a short time, but has ceased, and there has been little raving for many hours—indeed Sunday was by far the worst day. She has been under the influence of strong and oft-repeated doses of morphia, which have certainly been more effective than before. Mr. ——— is still of opinion that the present state of things may continue for some time.”

On the 5th, the following from the surgeon. “Early yesterday morning Mrs. — had an attack of rather violent diarrhœa, which lasted some time, but stopped spontaneously. I don’t think it did any harm, and did hope at the time that it was critical; but she has remained much in the same state as when you saw her, alternately calm and highly excited. She certainly slept for three hours last night with less morphia, but this morning is as violent as ever. The pulse continues the same, but the skin is more hot and dry; the tongue is also rather dry. She takes nutriment, but it is very difficult to get her to swallow medicine. I do not think that in her present state I should give her chloroform internally, being too heating and stimulating; but I do quite agree with the plan of adding a little antimony to the sedative drops, as there is more heat of skin and no tendency to violent perspiration. I am also using tepid bathing or rather sponging; the former would be hard to effect. I also notice this morning a slight yellowness about the mouth, on which account I may administer, *when I can*, a mercurial.”

On the 7th, Mr. — wrote as follows: “Mrs. — is certainly better; she is generally calm and much more rational; sleeps about three hours each night and doses the rest of the night, with about the same period of rest during the day. Pulse continues very quick; bowels open once or twice daily; tongue disposed to be dry, but not so much heat of skin. The right arm is very much inflamed from the wrist to the shoulder, I suppose from her being held when so very violent. I took her some flowers this morning; she was much pleased—said, how lovely! how beautiful! and told me all their names

correctly. Complained of her arm, and asked for some lotion for it; fell asleep whilst I was sponging it. Since Tuesday, the treatment has been very simple. I then left off morphia in the large repeated doses, giving only one dose of it at night. This at once produced more calm and refreshing sleep than all the other before given, and she takes a mixture containing Liq. Amm. A. Tr. Hyos. and Mist. Camph."

On the 16th of May, I heard from the husband as follows: "I think it due to you to inform you of Mrs. ——'s very favourable state after her alarming illness. She is now gaining strength as rapidly as can be expected or safely trusted, though her weakness is still very great; yet she will, we hope, be able to sit up for a short time in an easy chair to-day. Her mental powers have perfectly been restored, and she is calm and cheerful. She has no remembrance of pain, but a clear notion of having been in delirium, and the remembrance of many of the things which she said in her aberrations. Her chief trouble now is a considerable eruption in the skin, and a great discharge (purulent) from her arms and shoulders, which have been lanced. She occasionally starts out of sleep in a wild manner, which however passes off directly. I suppose the case altogether, even as far as you witnessed it, was one out of a thousand in severity. I trust, please God, there is no human probability of a second such time in any future confinement. There is now a confident assurance, as far as we can see, of her speedy restoration to us. . . ."

After the repeated formation and discharge of abscesses in various parts of the limbs, this patient ultimately recovered completely; and within a few months

has passed through a second confinement without any casualty whatever.

Case 5.—August 22nd, 1854.—Mrs. B., a married woman of delicate constitution. Pregnant with her first child, and said to be within six weeks of her confinement. Attacked at two o'clock this morning with pain in the body, followed by pain in the head and sickness, accompanied with a feeling as though she should lose her senses. A few hours afterwards she had a convulsion; and this having several times recurred, her surgeon was sent for. The symptoms continued with increased severity in spite of free relief from the bowels by enema, and I was summoned at 11 P. M. I found her insensible, suffering from eclampsia with no consciousness in the intervals, the fits recurring frequently. Pulse rapid and small. Pupils not dilated; stertor; frothing at the mouth; abdomen tense; cervix uteri gone, but os scarcely at all open. No power to swallow. The convulsions were so severe and frequent that we thought it advisable to bring on labour, and I managed to insinuate my finger into the os and rupture the membranes; after which, the abdomen became more flaccid, but the convulsions were not abated. I now observed that the fits recurred every eight or ten minutes, and the stertor was frightful; but there were no external signs of serious congestion, except at the height of the convulsions, when the lips became swollen and purplish. Conjunctivæ not injected. Pulse hurried during the fits. Uterus contracted at intervals. She was bled to about half a pound, and then made to inhale chloroform by placing small quantities on lint under her nostrils. By these means the number of fits was lessened, and

she had only two in an hour, with an interval of half an hour between each. I had several times attempted to dilate the uterus; and at about 3.30 in the morning of the 23rd, finding the os fully dilated and the child's head in the pelvis, I applied the vectis, and quickly delivered her of a dead child; the placenta followed immediately, and the uterus contracted firmly to very small dimensions. Fits of convulsion, however, continued, with intervals of a quarter of an hour or twenty minutes; the pulse became more resisting; the skin warmer, and another cupful of blood was allowed to flow. A blister had been applied to the nucha, and turpentine to the sternum. An hour afterwards I left her, the fits recurring with as much severity as before, and bloody froth issuing from the mouth. The pulse was of sufficient strength; there was no uterine loss; and it was impossible to give anything by the mouth.

10 A. M.—Still quite unconscious; respiration hurried and blowing, *but without stertor*. Pulse very rapid and indistinct; skin hot; a convulsion fit about every half hour.

2 P. M.—In the same unconscious state, never having shewn any sign of consciousness since I first visited her. Pulse 140, not very weak. Skin hot. Urine to be drawn off and examined. Enema Terebinth.

9 P. M.—No convulsion since last visit. Injection not returned. Pulse 108. Respiration quiet, less rapid, and without stertor or blowing. Still unconscious, but yet in a more favourable state than at last visit. Has been made to swallow a few spoonfuls of fluid. Appears to be sensible of pain from the blister when her head is moved; and the nurse says she has once pronounced a word. Has had two 4 gr. doses of calomel

put into her mouth, and they were probably swallowed. I am, for the first time, inclined to think she may be restored to consciousness and rally from this fearful attack. All active interference to be avoided at present.

24th.—10 A.M.—No convulsions during the night, and she has been able to swallow some gruel. Is writhing about with pain apparently from uterine contraction, and there appears a gleam of returning consciousness. Pulse 108. Bowels fully relieved; motions dark and passed involuntarily. Urine contains a considerable quantity of albumen. To have $m\bar{x}$ Tr. Opii at once, and another dose in about two hours if required.

10.30 P. M.—Has taken only one dose of the opiate, and has slept comfortably since. Bowels still acting involuntarily. Pulse 84. Respiration natural. Uterus less rigidly contracted, and lochia increased. She awoke during my visit, and put out her tongue on my asking her to do so. To be kept perfectly quiet.

25th.—10 A.M.—Found her awake, with her eyes open, face slightly flushed, with an expression of semi-consciousness. Pulse 120. She had had a copious relief from the bowels *voluntarily*, sitting up for it; but had also undergone too much excitement, having seen several relations. Upon the whole she was better; for she put out her tongue readily, and told me, in answer to a question, that she felt very little pain. Lochia flowing; uterus less tense. Ordered saline mixture, and to be kept very quiet.

10 P. M.—Found her sitting up in bed looking wildly about her, with a pulse at 120 and of less strength. Skin cool, said she had no pain, but felt thirsty; we gave her some porter and an opiate, and she took the cup in her own hand and drank it.

26th.—Still only partially conscious, and suffers occasionally from what might be termed a suppressed convulsion, when she says she must die. To take 10 minims Liq. Cinchon. in milk three times a day.

29th.—Much the same, except that she has longer lucid intervals. Has a wild demented look, and raved somewhat in the night. Bowels open. Pulse 108. Takes the porter and opiate, and Liq. Cinch.

30th.—More conscious to-day, but very artful. Pulse below 100. Cont. Rem.

From this time she went on gradually improving in mind and body from day to day; and when I accidentally called upon her early in October, I found her in all respects quite recovered. She had no recollection, however, of the most serious part of her case, nor did she remember any of the circumstances attending the birth of her child.

ON CRANIOTOMY.

MY object in publishing these "Records" of Consultation Midwifery Practice being that of conveying a few practical exemplifications of certain subjects rather than of entering into minute descriptions of them, I have but little to remark about Craniotomy beyond what is to be found in the cases themselves. It is an operation so repulsive to the feelings of any right-minded practitioner, that we should be glad to dismiss it altogether from our consideration, were it not that no doubt whatever can exist as to its occasional expediency and necessity. The idea of depriving an infant of its life ere it has breathed the breath of life is almost abhorrent enough to our sense of humanity to deprive us of the power to execute the sentence, even when our judgment will not allow us to deny its necessity ; and the only consolation is the hope that the same circumstances which have rendered the operation of Craniotomy unavoidable for the safety of the mother, may have also deprived the child of vitality before our work of mutilation begins. In several of the cases now brought forward there was no doubt of this having happened ; but even where we are denied this satis-

faction, we must not allow our feelings to compromise the life of the mother because we cannot bring our minds to hasten the death of the child ; if there were a chance of saving the child, the operation would not be required ; and if the latter be indispensable, the child must perish whether it be performed or not, only with this difference—that, if the operation be too long delayed, in avoiding the painful expedient of destroying the child, we may be guilty indirectly of sacrificing the life of the mother, and lose both ; whereas, even when the operation is difficult and protracted, it does not seem to be attended with much danger to the mother for whose sake it is performed. Of the eight cases reported, all had good recoveries but one ; and in that exceptional case the operation was not performed until after the death of the mother, and therefore ought scarcely to have been reckoned amongst them. Indeed it is introduced more for the sake of showing that had craniotomy been resorted to at an earlier period, there might have been a possibility of saving the patient. It will be seen that the funis presented with the head ; and as it was a case in which the head could not be brought through the pelvis, there could have been no chance of saving the life of the child. The case therefore is calculated to convey a good practical lesson, that, *when there is a disproportion between the head and the pelvis, and reason to know, from the funis presenting, that the child cannot live, the safest plan will be to lessen the head by craniotomy ; and that this should be preferred to any other mode of delivery that entails greater suffering and danger upon the more valuable life of the mother.*

The other cases were severe and difficult, but they

were eminently successful; and it may not be without some practical benefit to others to state that, in the removal of the perforated cranium, I found no instrument so valuable as a pair of strong (not clumsy) beaked forceps introduced as far as the blades would reach, *one inside and the other outside the skull*, and the handles tied firmly together with tape. It adds much to the safety, and not much to the difficulty, of the process, to pass the blade which is to remain outside the skull *between the bones of the head and the scalp*; by which means we are quite secure of not including in its grasp anything belonging to the mother, and the scalp protects the soft parts from the contact of the forceps during the extraction of the head. In order to facilitate the application of one blade inside and the other outside the cranial bones, the blade that is to remain inside should be rather longer than the other; so that after the instrument has been introduced *closed* into the opening made by the perforator, it may be withdrawn far enough to allow the outer blade to be guided outside the bones without the inner one being at the same time disengaged from within. After all has been properly placed, it will be necessary to tie the handles firmly together; as it would tire the hand of the operator to trust to that alone, and render him unable to act upon the forceps with equal precision and effect.

It has often occurred to my mind that could the public, those not of the profession, by any means, or in any degree, realize the difficulties and conflicting emotions which the conscientious practice of our profession entails upon us; if they could picture to themselves the nervous anxiety that in many emergencies must necessarily be coupled with sound judgment, knowledge of

expedients and aptitude in applying them; and often with extremely delicate manipulations, incompatible, as they might think, with mental anxiety and emotion; if they could know what a strain there often is upon the mind and body in our endeavours to reconcile sympathy with steadiness, kind attentions with firmness and resolution in performing painful or dangerous operations; compassion with *apparent* indifference; they would be more studious to avoid those annoyances, now too frequently occurring, which deprive us of the full enjoyment of the successful issue of our endeavours, and embitter the reflections which untoward cases are apt to force upon our minds. Quackery, in every form, is a bitter pill for a regular medical man to swallow; but the public are so fond of dabbling in physic, that, unless frightened by severity of illness, they willingly become the dupes of every new medical phantasm; and seem more disposed to encourage the pretending adventurer, than to abide by the more reasonable counsel of the practitioner on whom they would rely if they considered their lives to be in danger. How is this to be accounted for? Why do the public trifle in the main with a profession they look to for safety when real danger stares them in the face? Is it a part of the constitution of man or woman to be more pleased with delusion in the shape of novelty, than with experience gained by years of study and hard toil? Could those who are attracted by every new phase of illegitimate medicine be induced to regulate their feelings and opinions generally upon the same principle that would guide them in circumstances of *real danger*, the legitimate practisers of the art and science of medicine would have less reason to deplore the want of faith and discrimination on the part of

the recipients of their advice, which now so frequently prevails; and would have their anxious endeavours to promote the welfare of mankind more amply rewarded by the gratitude of those who, in difficulties, anxiously demand their services. It is very questionable whether medical men are not too ready in offering gratuitous services to the public: quacks do not follow the example, the public are slow to appreciate the gift; but the system has become so general and extensive that disgust would be expressed if it were withdrawn; and there is a pride and solace, to those who have the opportunity, in diffusing the benefits they are capable of affording as widely as possible to the poorer classes of mankind. Is this an argument for the rich to grudge their confidence? Is it a ground for the encouragement of quackery? Is it probable that those who study their profession with the most diligence, and practice it with the greatest liberality, are the least qualified to dispense the benefits it is capable of affording? To answer these questions in the affirmative would be an insult to any reasonable and unprejudiced mind; and the cupidity with which the services of educated professional men are sought in cases of real emergency proves the negative. Ought this not also to induce all who may require medical advice (and who is there who may not be in need of it) to exercise a greater degree of regard for a profession they may be obliged to rely upon for comfort and security, than to favour, in their time of health or moderate illness, the absurd pretensions of those whose only object seems to be to dupe others for their own worldly advantage, and who in reality are wofully ignorant of the fundamental principles of the noble art of healing?

No. of Cases, 8.

1. Recovered	5. Recovered
2. do.	6. do.
3. Died	7. do.
4. Recovered	8. do.

CASES.

Case 1.—Oct. 31st, 1851.—Mrs. ——— æt. 41 years. Married late in life, and now in labour with her first child. She is strong and muscular, and possessed of great fortitude. Her labour commenced on the 24th. The waters came away early in the morning of the 29th. The pains on each preceding day had been irregular and ineffectual, and were relieved by opiates. Two surgeons had been in attendance since the morning of the 29th, who had bled her and given antimony to favour the dilatation of a very rigid os uteri. I was called in at 4.30 this morning, and found the head presenting high up at the brim, and os uteri very indisposed to dilate. The pains had been severe for many hours; but as her general condition was pretty good, I advised waiting a few hours more. I saw her again at eight o'clock, her pains had been very severe, but produced no good effect. Head resting on the brim, and os uteri dilated to about $1\frac{1}{2}$ inch in diameter, thick and unyielding. Pulse getting rapid, and patient very anxious for relief. I tried the vectis, but could not move the head; and as the foetal heart could not be heard, and the child had not been felt since yesterday, it was determined that I should perform craniotomy; and after nearly five hours' almost incessant

work, I extracted a male child that had been dead some time,—the head by piecemeal, and the body with difficulty. The placenta came away an hour afterwards, the cord being half decomposed and very small. The patient bore the operation with the greatest courage, confidence, and composure. I left her in a favourable state at 3 P.M., and saw her again at eight in the evening; she had been sleeping almost ever since we left, and was apparently as well as persons usually are after a common delivery. The child was a full-grown boy; and so little room was there in the pelvis, that after I had extracted more than two-thirds of the bones of the head, there was still considerable difficulty in getting the rest away. My proceedings were very much embarrassed by the only partially-dilated and unyielding state of the os uteri, and the difficulty of preventing its being injured by the sharp pieces of the cranial bones. I never witnessed so difficult a case, nor had to perform so difficult an operation. I found the blunt hook useless, the crotchet nearly so; and I effected my object, after opening the head, chiefly with a pair of beaked forceps, my own fingers, and my vectis.

The next day I found her remarkably well, having had a good night, and passed urine without difficulty or pain. She recovered quickly, without a single untoward symptom.

Case 2.—May 30th, 1852.—Mrs. H., æt. 46 years. In labour with her eighth child, at full period. Her first four children had been born alive, but each labour was severe, requiring instrumental aid. Her fifth, sixth, and seventh children were stillborn after very difficult

labours, at periods short of the full term of pregnancy, (one at six and another at seven months). When I was sent for she had been in labour many hours, with strong pains. The waters escaped at noon. I saw her at 9 P. M. and found that Mr. — had three times attempted artificial delivery, but could not succeed in bringing down the head, which was lying at the brim with the anterior fontanelle towards the left ramus of the pubes. Scalp tumid. Head immoveable during the pains. Patient exhausted, countenance bloated and purplish, and a tendency to anasarca. I tried the vectis, but after an hour could only get the head a little more wedged into the pelvis; indeed I could not introduce the blade far enough to reach the chin. The child had not been felt to move for several hours, and it was thought to be dead. I saw no chance of delivery without craniotomy, and performed it at the request of my colleague. The extraction of the head was very difficult, as well as that of the shoulders; fully bearing out the necessity for reducing the size of the head, and leading to the conclusion that deformity of the pelvis had been progressively increasing since her first labours. Rapid recovery.

Case 3.—Jan. 17th, 1853.—Mrs. —, in labour with her first child. Her husband died three weeks ago of consumption, and she herself was very delicate. She had been attended by a midwife from the commencement of her labour yesterday morning until this morning, when a surgeon was called. The funis and head presented. Vectis and forceps were used without effect. Mr. — afterwards introduced his hand and turned, but could not bring the head through the pelvis.

Knowing the child must be dead, he felt at liberty to make stronger traction, and the result was that the vertebræ of the neck gave way, leaving the body of the child hanging by the soft parts of the neck. The woman was at this time in an extreme degree of exhaustion, and I was summoned. I found her moribund, and she died a few minutes after my arrival. Wishing to complete delivery, I opened the head behind the left ear, and, not without great difficulty, extracted it. I found the head lying very forwards over the pubes—had there been a rupture of the uterus in front? As the funis presented and the child must have been dead, it would, I think, have been better to lessen the head than resort to the doubtful expedient of turning.

Case 4.—July 19th, 1853.—Mrs. —, in labour with her first child, at full period. Labour commenced on the 17th, at one o'clock in the morning. Woman tall and thin, with narrow hips. Right brow and eye presenting. The head had not moved for several hours. When I arrived, I put my finger into the mouth, and with difficulty converted it into a face presentation; but the lower jaw remained behind the pubes, and I could not bring it down. I applied the vectis, first to the occiput and afterwards to the chin, but could not move the head at all, nor bring the chin down under the pubes. As so many hours had elapsed, and the child appeared to be dead, it was determined to perforate. No part of the *head* could be felt; the uterus was well dilated, but not quite out of the way, the anterior lip being pressed between the brim and the head. I introduced the perforator through both orbits, got away some of the brain, and passing a blunt hook in at one

opening and out at the other, I got a good purchase, but with considerable traction could produce no movement. I then endeavoured to press up the mouth and chin behind the pubes, and, owing to portions of brain having escaped, succeeded in doing this and bringing the anterior fontanelle within reach. I then perforated the frontal bone at its eminence, but could not bring the head down until I had removed piecemeal nearly the entire left side of the cranium; then, by applying a pair of craniotomy forceps over and under the right parietal bone (one blade being outside the scalp and the other within the cranium) I was able to give the head a turn, at last bringing the occiput out under the pubes in the natural position. The shoulders were born with difficulty, and even the placenta would not pass readily through the pelvis. The delivery occupied me altogether about six hours; and unless the patient had been remarkably firm and well-behaved, I could scarcely have accomplished it at all. There was no rupture of perineum, or evidence of other injury to soft parts; but I feared ill consequences from the long-continued impaction. An opiate was given, and we left her as well as could be expected at about 8 P. M.

20th.—Was going on favourably until evening, when she began to have lancinating pains in several parts of the abdomen, with fever and sickness. Turpentine fomentations were applied several times during the night.

21st.—I was requested to visit her this afternoon, and found her abdomen exquisitely tender; her stomach irritable; considerable tympanites, the coils of distended bowel being visible through the integuments; body conical; countenance anxious and expressive of pain; inability to move or draw a deep breath without pain.

But her pulse, although feeble and small, were under 100, and the lochia were going on. There was severe peritonitis, but apparently not much uterine complication. She seemed so low and exhausted that I did not dare to take blood; but the abdomen was blistered extensively, and she was ordered a strong opiate draught, and a dram of Sp. Tereb. every three hours in a little brandy and water.

22nd.—Got some comfortable sleep in the night, and has no pain in the abdomen except when pressed upon, and the tenderness is less than yesterday. Lochial discharge somewhat offensive, and we directed the vagina to be frequently washed out with warm water. Pulse 90. Tongue creamy. Complains of a little nausea after the turpentine. Abdomen still very large and tympanitic. To take the turpentine every *four* hours, and another opiate at night.

23rd.—Has passed water freely since the warm vaginal injections, and speaks of them as very comforting. Slept again at intervals last night, and has kept the turpentine down; but this morning her bowels began to act, and by 3 P. M. she had had six motions. Tympanites diminished and abdomen very little tender. Pulse 90. Tongue cleaner. To take the turpentine every six hours, and an opium pill after each loose motion. Is cheerful, and hopeful of recovery.

24th.—Had two more motions yesterday, and one this morning, and has had no occasion to take the opium. Has been able to take the turpentine every six hours; had a comfortable night; no strangury; lochia flowing. Vaginal injections two or three times a day. Abdomen not tender, but still tympanitic and conical, though much less so than before. Pulse 90, soft. Lips break-

ing out, which she attributes to the turpentine. To take a dose every *eight* hours. Tongue cleaner.

31st.—When I called upon her to-day, I found her sitting up to dinner. She told me she had taken the turpentine every eight hours till the morning of the 27th, and then left it off in consequence of its producing irritation of the bowels. She continued the vaginal injections until the 29th, when Mr. — said she might discontinue them. There has been no suppuration or sloughing in the vagina, nor does she feel anything wrong or unnatural in the parts of generation. Pulse good. Tongue clean. Appetite returning. She soon quite recovered.

Case 5.—September 1st, 1853.—Mrs. —, in labour with her third child, which had already lasted two days. I found her much exhausted, and the pains becoming very feeble. Head presenting at brim of the pelvis, uterus dilated, and several inches of funis in the vagina still pulsating. I advised turning, in the hope of saving the child. Mr. — turned the child, but the head would not enter the pelvis; the forceps could not be applied; and the vectis, unassisted by uterine pain, failed to bring it through the brim, which was exceedingly small, owing to a projecting sacrum. Some nourishment was then given, and as it seemed desirable on the mother's account to lose no time, I perforated the occipital bone,—a difficult proceeding from my being scarcely able to reach it with my finger so as to protect the soft parts from injury by the instrument. As it was, the perforator entered the mastoid process on the first attempt; but, on trying again, I perforated the occiput just above the spine, and then the head was drawn

down without much difficulty, and the placenta soon followed. We left her somewhat faint and exhausted, but not without hope of her recovery. She fortunately took no harm and soon got quite well.

Case 6.—November 6th, 1853.—Mrs. —, æt. 33 years. In labour with her first child. Pains began on the 4th, and continued at intervals for some hours; then the waters escaped; dilatation took place very slowly, the soft parts being rigid and unyielding. Early on the 5th, the pains became more urgent, and in the evening were so severe as to induce Mr. — to stay with her all night. To-day he had also visited her several times, and until 2 P.M. the pains had been very frequent and severe. Since that time they had abated in force and frequency; the pulse had risen to 130; the soft parts had become very dry and tender; and a portion of the anterior lip of the os uteri, engaged between the head and pubes, was swollen and extremely tender. I applied the vectis, but the head was so firmly impacted and stationary that, with the existing state of exhaustion and tenderness of soft parts, I thought it best not to make much effort. The mother had not felt the child move for several hours: I could not with the stethoscope hear the foetal heart; and supposing it to be dead, we considered it would be the best practice to lessen the head and release the mother from her sufferings as soon as possible. At 10 P.M. I used the perforator, and delivered her of a very large male child, the birth of which it would have been hopeless to wait for with safety to the mother. The placenta was very large, and there was free loss during its expulsion; but we left her at 11.30 as well as could be expected.

7th.—Found her at noon to-day very comfortable, considering the hazardous state she was in yesterday. Pulse quiet. No abdominal pain; had passed water without difficulty.

She recovered without a bad symptom.

Case 7.—November 27th, 1853.—Mrs. —, æt 43, in labour with her second child, at the full period. This was the same patient who was the subject of Case 1. She had been complaining of pains more or less for three weeks. The waters escaped three or four days ago. I was summoned by her surgeon at 4 P. M., who told me her pains from 1 A. M. had been incessant and very severe, and accompanied with the escape of meconium, leading to the idea that it was a breech presentation. I found the head presenting at the brim and lodging on the pubes. Uterus only partially dilated. No pressure by the head upon the os uteri during pains. There had been no advance for many hours, and the child had not been felt all day. The presentation was natural as to the position of the head, but there was a small coil of funis down. The antero-posterior diameter of the pelvis was too small to allow the head to enter; laterally there was more room. In consultation it was determined to perforate, but even when this had been done the head did not advance; and it was not until I had removed more than half the cranium bit by bit, that I was enabled by means of a strong pair of craniotomy forceps to pull the base of the cranium into the pelvis and deliver. The confusion of parts, caused by the only partially-dilated os uteri, the fold of funis, the ragged scalp, and the sharp edges of bone, was such as to render the operation one of

extreme anxiety and difficulty, and I was engaged in it almost four hours with scarcely any intermission. There was no rupture of perineum, but I was very anxious about the anterior wall of the vagina, where the pressure of the edges of bone was severe. I left her, however, at 9 P. M. tolerably comfortable, after she had taken 40 m. Tr. Opii.

The next morning we found her as well as most women are after a common labour, and she had passed water twice without inconvenience. Nothing occurred to prevent a rapid and complete recovery; but I made up my mind to tell her, that I would not attend her again, should she become pregnant, unless she would consent to have labour induced at the seventh month.

Case 8.—May 19th, 1854.—Mrs. —, æt. 28 years. Taken in labour with her first child at about three o'clock this morning, the first symptom being the escape of the waters. Mr. — was in attendance nearly all day, and at seven P. M. requested me to meet him in consultation. The funis and head presented, the former being very curiously tied in a knot, which, with a considerable coil of it, occupied the vagina. I found the head lodging on the brim of the pelvis, particularly over the pubes, the os uteri quite dilatable, and the soft parts in a favourable condition. The pains had been severe for several hours, but had no expulsive effect upon the head; but as the uterus required further dilatation, I advised waiting an hour or so, turning being out of the question, owing to the position and size of the parts. The pelvis appeared not to measure more than two inches from the promontory of the sacrum to the pubes; the uterus was firmly contracted around the

child; and the head occupied the whole of the brim. At 10·30 I saw her again; the uterus was then sufficiently dilated, but engaged between the head and pubes; and it was determined that I should attempt delivery with the vectis, although there seemed but little prospect of success. With some difficulty I applied it, but could do nothing more than bring the occiput a little more into the pelvis. The pains, which were frequent and severe, produced no impression when unassisted. Mr. — wished to try the forceps, but could not introduce one of the blades; and as the patient was beginning to be restless, and the cord had ceased to pulsate, we determined at once to open the head. Before I saw her she had taken several doses of laudanum and antimony, with good effect in relaxing the soft parts. I applied the perforator and emptied the cranium, but even then the head would not enter the pelvis; and it was not until after several hours' hard work, during which we got away with craniotomy forceps the whole of the vault and much of the base of the skull piecemeal, that we were able to get the face into the world; and then the shoulders gave almost as much trouble, but we at last succeeded by passing a blunt hook round an axilla high up, and pulling down one arm in the direction of the sacrum. No rupture of the perineum took place, nor do I believe there was any severe injury to the soft parts beyond what the long-continued and strong pressure would necessarily occasion; but it was exceedingly difficult to prevent injury from the various broken pieces of the cranium during their extraction, and we were occupied until 4·30 A. M. before we could complete delivery. The child was a male, and not very large. The placenta was expelled

naturally ; there was no hæmorrhage, and we left the patient with a good pulse and tolerably comfortable, considering the great suffering she had unavoidably undergone. A sister, who was with her, told us that she had had several labours of a severe character, requiring the children to be destroyed before they could be born.

I did not see the patient again, but Mr. — told me she had had no difficulty in passing water, and recovered without any unfavourable symptom.

END OF PART THE FIRST.

PART II.

AN

ESSAY ON UTERINE HÆMORRHAGE,

TRANSLATED FROM

BUSCH AND MOSER'S

HANDBUCH DER GEBURTSKUNDE.

HÆMORRHAGIA UTERI.

IN the following treatise we propose to include under the term Hæmorrhagia Uteri only such losses of blood from the uterus as may be considered abnormal, omitting therefore the regular menstrual discharge, the usual loss from separation of the placenta after labour, and the natural flow of the lochia.

Hæmorrhages from the uterus are not only the most frequent but also the most dangerous affections to which the female sex is liable; they happen in all degrees of severity; are sometimes chronic, sometimes acute; at one time gradually undermining the health; at another, destroying life quickly and suddenly; and are, in a like degree, frightful and alarming to the physician, the patients, and their friends. Their sudden appearance and the rapid developement of dangerous symptoms, the prompt attention which they demand, the frequent obscurity of the cause which produces them, and the difficulty that is often experienced in obtaining sufficient assistance at the moment it may be required, are circumstances, amongst many others, which not unfrequently confuse the physician at a time when he requires the

greatest presence of mind, and can accomplish the work he has to do only by means of the most energetic interference. It therefore becomes the especial duty of the physician to make himself thoroughly acquainted with the theory of uterine hæmorrhage, to study the circumstances of each individual case with calmness and composure, to insist upon all his directions being accurately carried out, and indeed, in all doubtful cases, to remain himself with the patient until all danger is past. In no description of illness probably is the conduct and demeanour of the physician of greater importance than in this; not simply because these dangerous cases may easily disconcert him, but rather that he may not by his manner excite anxiety in the mind of his patient, which always produces an injurious influence over the hæmorrhage; it is therefore his duty to give his patient encouragement, even whilst he may be labouring under the apprehension that she may die in spite of his efforts to save her.

Uterine hæmorrhage appears under various forms and circumstances, and these depend not only upon the character and kind of the flow of blood, or the quantity of blood lost, but chiefly upon the condition of the uterus. It is necessary to pay attention to all these circumstances, and to consider them carefully, that a right judgment may be formed of each particular case.

We cannot wonder at the liability of the female sex to uterine hæmorrhage, when we take into consideration the nature and situation of the uterus, its external communication, its abundant supply of vessels, (which, in consequence of its functions, are capable of great expansion), the natural monthly discharge, and the disturbances to which the generative organs are so

frequently exposed; the principal cause, however, is the generative function; for the position and vascularity of the uterus appear to exert but little influence in producing hæmorrhage. Thus, in the unimpregnated, and especially the virgin uterus, hæmorrhages are proportionately rare; but are more frequent when the constitution of the uterus has been altered by frequent pregnancies, or by organic disease. In a young female, even with a lax condition of uterus, hæmorrhage will not take place except under the influence of a violent exciting cause, or of deranged menstruation. Many writers have considered all hæmorrhages occurring in the unimpregnated state as disordered menstruation: this may be correct when the uterus is healthy and in a virgin state; but hæmorrhages may occur from other causes at a later period, and during the existence of organic changes of the structure of the uterus. *Lisfranc* has maintained that uterine hæmorrhage of any duration almost always depends upon organic alteration in the structure of the uterus; and we agree in this opinion as far as it has reference to hæmorrhage occurring in an unimpregnated female at other times than at the proper menstrual period. Under such circumstances the uterus is always unhealthy; for when otherwise, the relative inactivity of the unimpregnated uterus will effectually prevent hæmorrhage even when circumstances exist which are favourable to its production. The vessels of the uterus are indeed numerous, but they are small, and the close contact of the opposite sides of the virgin uterus prevents their opening upon its internal surface. Quite different however are the circumstances connected with pregnancy, parturition, and the puerperal state. The changes which take place in the uterus during

these occurrences are altogether of a nature to increase the tendency to hæmorrhage. In the first place, the uterine vessels, both arteries and veins, undergo enlargement during pregnancy, especially at the inner surface of the uterus and at the part where the placenta becomes attached; the substance of the uterus becomes, so to speak, rarefied during its expansion; the uterus itself, during the whole course of pregnancy, becomes as it were the centre of increased vascular activity, and a new mode of circulation is set up in connexion with the placenta. During labour, the ovum becomes separated from the uterus, and bleeding to a small extent necessarily occurs in consequence. So long as the ovum remains in the uterus and normally attached to it, there is no loss of blood from the enlarged vessels; but after labour, these vessels open freely into the cavity of the uterus, and powerful contraction of this organ is required in order to prevent the occurrence of hæmorrhage. If, therefore, the tendency to contraction is too slight, or there is any obstruction to the proper diminution of the uterus and its vessels after labour, then will hæmorrhage take place. From these considerations we can readily understand that metrorrhagia is one of the most frequent disorders of pregnant, parturient, and puerperal women; and from the great difficulty there often is in restraining hæmorrhage, it may be safely asserted that the greater number of females who die during or soon after labour, lose their lives from hæmorrhage. In the obstetric wards of the Frederick William University at Berlin, from the autumn of 1829 to the end of the year 1835, uterine hæmorrhage occurred five times during pregnancy, eighteen times in the first four periods of labour, thirteen times in conse-

quence of placenta prævia, one hundred and twenty-four times in the fifth period of labour, and thirty times after labour, altogether one hundred and ninety cases; the proportion of cases of hæmorrhage in a total of two thousand and fifty-six labours being as one to ten and a half.

Uterine hæmorrhages differ so much in their character and in the circumstances under which they occur, that it is important to consider them under various points of view. For practical purposes they may be divided into *active* or *hyperdynamic*, and *passive* or *adynamic*; to which may be added the *spasmodic* or *dysdynamic*, and those which depend upon *disease* or *displacement* of parts.

Active hæmorrhages depend upon an exalted degree of irritability in the vascular system, and occur in strong plethoric individuals. In determining the nature of these hæmorrhages we must not limit ourselves to the consideration of local circumstances, for they may be active but for a time, and then continue in a passive form; the existence of great vascular activity, so that the blood flows to the uterus with increased power, will alone enable us to decide. *Passive* hæmorrhage is of quite a different character; here the strength of the vascular system is diminished; and should local plethora of the uterus be present at the same time, this would depend less upon an increased influx than upon an impeded reflux of blood. Passive hæmorrhages therefore occur principally in weak individuals, in whom either a local excitement causes temporary congestion, or the vessels are too feeble to withstand the natural impetus of the circulation. In these cases there are no symptoms of general excitement, the bleeding

generally comes on suddenly or is preceded by local symptoms only, and the constitution becomes affected by the loss of blood only at a subsequent period.

The *hæmorrhagia spasmodica seu erethistica*, as it has been called, can scarcely be considered a distinct variety, but may generally be reduced to one or other of the former kinds. The nervous system, indeed, plays an important part in hæmorrhages of every description, particularly in those which are uterine, but not in a manner to alter essentially the character of the hæmorrhage. If the cause which produces the bleeding acts upon the nervous system, the irritation thus produced may excite the circulation, and the hæmorrhage will be *active*, or of the kind described as *hæm. erethistica*; or if the nervous system, instead of being excited, be overpowered, the circulation will be delayed, the textures relaxed, and the bleeding *passive*; to which, therefore, the term *hæm. paralytica* has been applied. But the nervous system also may become affected secondarily, and then the phenomena of excitement, paralysis, or spasm are associated with the hæmorrhage, and react upon this again.

The fourth kind, or that occasioned by disease and displacement, is the most frequent in midwifery, because it includes hæmorrhage resulting from separation of the placenta; but it appears to us incorrect to establish this as an especial kind of hæmorrhage, which may be either active or passive.

Metrorrhagia has also been divided into *idiopathic*, or that which occurs in the absence of any organic change in the generative organs, or of disease in a distant organ which might occasion the bleeding; and *sympathetic*, which depends upon causes acting primarily

upon other organs, and reacting upon the uterus so as to produce hæmorrhage.

Uterine hæmorrhages may be either *internal* or *external*; in the former, the blood after having escaped from the vessels remains in the cavity of the uterus, because from some cause or other it cannot escape externally; in the latter, the blood appears externally. From the peculiar character and importance of internal hæmorrhages, they will presently be made a special object of consideration.

At whatever time, and under whatever circumstances uterine hæmorrhages occur, they always assume one or other of the forms or kinds described; which, however, have reference only to their *general* character. To make a *special* arrangement of them, we have in addition to consider, whether they occur during pregnancy, at the time of labour, or in the puerperal state; at what period of these they take place, and whether they occasion interruption to these processes, or are dependent upon them; whether they are connected with them accidentally or unavoidably; from what cause they arise, and what consequences they may induce. Before we pass on to the consideration of these special circumstances, we shall point out the general phenomena produced by loss of blood.

The phenomena which precede or accompany uterine hæmorrhages differ according to the causes producing them, the quantity of blood lost, the rapidity with which it flows, and the constitution of the patient. In many cases they are preceded by a sensation of tension and heaviness in the uterus, with increased heat in the pelvis and hypogastric region, and the bleeding then frequently affords relief to these sensations. In some

cases, the bleeding occurs without any warning, but little blood escapes at first, and the patient appears not at all affected by the loss; whilst in others, a greater loss occurs suddenly, interrupts the functions of life, and brings the patient into the greatest danger. Although, generally speaking, the effects of menorrhagia correspond to the quantity of blood lost, the rapidity with which it flows has also a very important influence upon the symptoms. When a large quantity of blood escapes quickly, the constitution suffers, and the patient may sink rapidly; whilst if a similar quantity be lost slowly, the constitution may suffer but in a slight degree. It is often a difficult matter, when summoned to a case of hæmorrhage, to determine the quantity of blood which has been lost; we may be deceived in many ways, and have nothing to depend upon but the statement of the attendants. The blood may have fallen upon the floor, and been wiped up before the physician arrives; it may have been lost in a water-closet, or be soaked into the bed, so that we cannot estimate the quantity; and if the hæmorrhage takes place at the same time that the liquor amnii escapes, the quantity may appear larger than is really the case. The accoucheur must, therefore, be guided principally by the impression the loss has already made upon the constitution; and in order to arrive at any certainty about the progress of the hæmorrhage, he should place the patient in a convenient position and lay a clean napkin under her to catch the blood, so that he may be able to judge of the quantity and rapidity of the loss. Sometimes the quantity is small, so that only a few ounces escape in several days; in other cases, a large quantity, amounting perhaps to many pounds, may be lost in a few hours. Hæmor-

rhages, which are at first slight, may suddenly become profuse; or an active loss may abate, but a slower effusion, a *stillicidium sanguinis* continue, shewing that the uterus has not regained its normal condition, and that a recurrence of the hæmorrhage is to be feared. Indeed, it is a frequent occurrence for uterine hæmorrhage to stop, and suddenly to reappear with renewed activity, without any particular cause, especially if the circumstances which originally occasioned it be still in existence. Moreover, the loss itself occasions changes in the uterus which increase the liability to a return; for a want of contractile power in this organ is an important cause of metrorrhagia, and this power will always be much diminished by great loss of blood.

The constitutional symptoms depend not only upon the quantity and rapidity of the loss, but also upon the constitution of the patient, the cause of the hæmorrhage, and the attendant circumstances. When the hæmorrhage is symptomatic, the general appearances will be modified by the disease of which the bleeding is a symptom. In women of full habit, it will be preceded for several days by general excitement of the circulation, heaviness of the limbs, increased heat, &c. In very delicate sensitive women, there will be general uneasiness and marked feverish excitement. If the loss of blood be small, and the patient of a strong and torpid constitution, it may go on for some time without producing much effect; and such persons not unfrequently lose blood during pregnancy for several days together, without hindrance to the prosecution of their accustomed duties. But weak tender women experience weariness in the limbs, weakness, alternations of heat and cold, look pale, and are unable to keep about. The

symptoms produced by severe hæmorrhage have reference both to the circulating and to the nervous systems, and also to the participation of individual organs in the disturbance. The countenance assumes a pallid hue, the lips lose their redness and the eyes their brightness, the head becomes confused; the patient cannot support the upright posture, but complains of vertigo, surrounding objects appear to her to turn round, her sight becomes dim, she has noises in the ears, and at last falls into a state approaching to fainting, which sometimes goes on to complete syncope. The pulse is at first quick and full, afterwards fluttering, and then entirely stops. The skin becomes livid and flabby, the extremities cold and often bedewed with a clammy sweat, respiration becomes remarkably laborious and hurried, and there is great restlessness and anxiety. The stomach generally soon sympathizes, the patient complains of sickness and inclination to vomit, and at last vomits green matter, which is always to be looked upon as a very unfavourable sign. These are the phenomena which occur, and which frequently terminate in fatal syncope, with or without convulsions, in cases of severe hæmorrhage where blood is lost quickly, suddenly, and in large quantity. It used to be imagined that in all fatal cases of uterine hæmorrhage, delirium and convulsions preceded death; but we have seen cases in which the patients spoke distinctly till within two minutes of their death, and suffered neither from delirium nor convulsions. Variations of this kind depend principally upon the constitution of the patient. In very sensitive subjects, the nervous system will be early affected, and cramp and convulsions supervene; whilst, in torpid subjects, the debility increases rapidly

without the supervention of spasmodic symptoms. In the former, the quantity of blood lost often bears but little proportion to the severity of the symptoms; whilst, in women differently constituted, the actual loss of blood alone is the cause of the appearances produced. *Ramsbotham* states that women of a spare habit of body, and who are accustomed to exercise, usually bear loss of blood better, and recover from its consequences sooner, than those who are inactive and have a tendency to corpulency. We also frequently observe that the same woman will bear loss of blood better at one time than at another, owing to some accidental influence upon her constitution; and experience seems to prove that the time of year, and the *constitutio annua* may exert considerable influence both upon the frequency and severity of uterine hæmorrhage, leading to the assumption that it is sometimes an epidemic disease.

If the loss be not great, and its influence upon the constitution be proportionably slight, particular symptoms, belonging especially to the metrorrhagia, nevertheless make their appearance. A very frequent symptom is headache, occupying the occipital region, sometimes very severe, and lasting a long time even after the hæmorrhage has ceased. If the hæmorrhage recur frequently, without much blood being lost at a time, the patient lapses into a peculiarly excitable state, complains of sleeplessness, indigestion, loss of appetite; the skin assumes a pale colour, like what is observed in chlorosis; the eyelids become œdematous and surrounded with a dark circle; the abdomen swells, and serous effusion takes place into the pleura and peritoneum.

The diagnosis of metrorrhagia, if not internal, can scarcely be mistaken; but as the blood may come from

the vagina, it will be necessary to examine the organs of generation to ascertain whether it flows from it or from the mouth of the uterus: here we must take into consideration that the vagina is seldom the source of the bleeding, and that in hæmorrhage from the womb, especially if at all considerable, the mouth of the uterus is always more or less open. In some few instances, menstruation continues, or appears at intervals, during pregnancy, and it may seem of importance to distinguish this from metrorrhagia; but the distinction is of little consequence in a practical point of view, for if the loss be slight, we employ such means only as will do no harm if it be menstruation; and if menstruation be so profuse as to affect the constitution, the same treatment must be adopted for this as for hæmorrhage. The diagnosis of uterine hæmorrhage in reference to the causes and source of the bleeding is very important, but at the same time very difficult, and attainable only by a complete knowledge of the theory of metrorrhagia, and a careful examination of all the circumstances of the case.

The ætiology of uterine hæmorrhage constitutes the most important part of the theory of the subject. The variety of occurrences to which the uterus is liable, the many sources from which the blood may flow, the circumstance that almost every abnormal condition of the uterus is attended with hæmorrhage, and that generally speaking the treatment has reference chiefly to putting a stop to this—all these declare to us the importance of this part of the investigation. The first question which here arises is the mode in which hæmorrhages *can* take place during pregnancy, labour, and in the puerperal state; and although authors differ somewhat upon the

point, the following may, as a general rule, be acknowledged as the sources of hæmorrhage.

1. *In the Course of Pregnancy.*—(a) Hæmorrhage from the cervix uteri, which is not covered with the deciduous membrane: this can happen only at a very early period, before the neck of the uterus is stopped up. (b) Hæmorrhage from the part of the uterus which is lined with the decidua, without separation of the ovum: in this case the blood escapes from the decidua vera, in the space between this and the decidua reflexa. (c) Hæmorrhage arising from rupture of the vessels connecting the ovum or chorion with the membrana decidua; in which, separation of the ovum necessarily takes place. (d) Hæmorrhage depending upon separation of the placenta from the inner surface of the uterus. (e) Hæmorrhage proceeding exclusively from the ovum, as from rupture of the vessels of the membranes, placenta, or navel cord; if, under these circumstances, blood flows out externally, it is an indication that the membranes have given way.

2. *During Labour*, blood may escape from all the uterine vessels situated in the part where the ovum becomes separated from the uterus. *After Labour*, it is possible for hæmorrhage to take place from the entire inner superficies of the uterus, which is then free throughout. We would here observe that, although these are the modes in which hæmorrhages may occur, the existence of these circumstances are not invariably followed by such a result.

The principal cause of uterine hæmorrhage, at whatever period it may occur, is a want of contraction of the womb. The contractile power of the uterus may be primarily suppressed, so that no disposition to con-

traction is present; or the disposition may exist, but effectual contraction be prevented by mechanical obstruction. It is also to be remarked that hæmorrhage may occur when there is contraction of the uterus, provided this be too feeble relatively to the force of the circulation. *Robert Gooch* describes a form of hæmorrhage which occurs occasionally after labour, the uterus being at the time sufficiently contracted to prevent hæmorrhage under ordinary circumstances. The cause of it he considers to be, a force of circulation sufficient to overcome the ordinary closure of the orifices of the blood-vessels, thus giving rise to hæmorrhage although the uterus is contracted in the ordinary degree. Although, therefore, in a practical point of view, it is very important to act upon the principle that want of contraction of the uterus is the essential cause of uterine hæmorrhage, and we ought, accordingly, to make particular efforts to excite it or to remove any circumstances that may prevent it; yet, on the other hand, the state of the general circulation must always be duly considered.

A particular state of constitution, depending seemingly more upon the nervous than the vascular system, is one of the predisposing causes of *hæmorrhagia uteri*. It appears in weakly, nervous, lymphatic, tender constitutions; in delicate women who have menstruated early and profusely, with a fine and freckled skin, large and strongly coloured eyes, and exalted sensibility. Such a disposition is often hereditary, and to be observed in several members of a family; or the same woman may have hæmorrhage in every successive pregnancy or labour.

Amongst the predisposing causes may be reckoned all those influences which bring the uterine organ into such

a state of debility that it is unable to withstand the impetus of the blood; and those also which increase the force of the circulation. Laborious and fatiguing employments, continued night-watching, depressing mental emotions, as grief, anxiety, care, sorrow, &c., menstruation too frequent or profuse; frequently recurring active hæmorrhages; scrofula, cachexies of every kind; gout, rheumatism, fever, and illness of every description that diminishes the bodily strength. Also too long nursing, especially after the commencement of a fresh pregnancy, frequent pregnancies, immoderate use of improper diet, abuse of weakening, unwholesome drinks, hot baths, emollient glysters, the too frequent employment of weakening medicines, venesection, antiphlogistics, and narcotics; abortion; confinement to very damp or warm apartments; immoderate venery, onanism, leucorrhœa, constipation; too great distension of the uterus, as from large, monstrous, or dropsical children, too much liq. amnii, &c., and diseases of the womb, induration, ulceration, excrescences, polypi, displacements, &c.

With respect to the influence of age, hæmorrhage will seldom be observed before the complete development of puberty; or in old age, except as the result of organic changes in the uterus. Women of mature age are the most liable to it, particularly such as continue to become pregnant at a more advanced period of life, when the uterus may be deficient in power to carry through normally the processes of pregnancy and parturition.

The season of the year, and the prevailing constitution of diseases, have also, undoubtedly, an influence upon the disposition to hæmorrhage from the uterus; especially the latter, which has been noticed by several writers.

The occasional causes of metrorrhagia are likewise very numerous, including every circumstance which increases to excess the flow of blood to the uterus, opens the uterine vessels, or effects a separation of the ovum from the uterus; as well as those which in a direct manner prevent contraction of the uterus. Injuries of the genital organs, implicating the substance of the uterus or ovum; true and false plethora, especially the latter; blows, kicks, falls, running, coughing, singing, sneezing, jumping, riding, electric shocks; lifting heavy weights; reaching to a height, ascending a flight of stairs, straining at stool or in passing urine; the use of hot drink and food, feverish excitement, sudden emotions, rough coitus, abuse of medicines having a stimulating effect upon the genital organs, spasmodic affections of the uterus, and a paralysed condition of the nervous system. These are the chief causes of uterine hæmorrhage, but the following have also been mentioned, viz: spasmodic affections of all kinds, especially of the intestinal canal, colics, inflammations, diarrhœa, dysentery, &c. It has been conjectured by *Bluff* that the movements of the fœtus may perhaps give rise to metrorrhagia and abortion.

Having thus described generally the nature and causes of uterine hæmorrhages, we proceed in the next place to consider them specially, as connected with pregnancy, labour, and the puerperal state, in which conditions they vary much, both as to prognosis and treatment.

(a) *Hæmorrhage from the uterus in pregnancy.* This may occur at any time during pregnancy, although the pregnant uterus does not appear to be at all periods equally liable to hæmorrhage. The menstrual periods,

those in which menstruation would have taken place were it not for the pregnancy, are those in which hæmorrhages from the pregnant uterus are most frequently observed. The monthly type which belongs to the generative organs in reference to their functions, and displays itself most conspicuously in menstruation, is by no means lost in pregnancy; for we find that the developement of the fœtus, premature births, and natural labour observe this type, and that the latter, as a rule, comes on at the time at which menstruation would have ensued. There is always, therefore, at these periods a local excitement which disposes to uterine hæmorrhage, and this is strongest in the early months of pregnancy. Hæmorrhages, consequently, occur more frequently during the first half of pregnancy than later. In early pregnancy, also, the ovum is less firmly connected with the uterus, so that a separation can more easily occur, and the disposition to abortion, with its accompanying hæmorrhage, is greater. In the second half of pregnancy the ovum is more firmly connected with the uterus; the latter is more withdrawn as it were from general and sympathetic influences, and the ovum fills it completely, by which the escape of blood from its vessels is more effectually prevented. Hæmorrhages are therefore of less frequent occurrence at this period, and, generally speaking, happen only when a separation of the ovum from the uterus has taken place. Besides this general division in reference to the frequency of hæmorrhages in the first and second half of pregnancy, there is also a decided difference according to the months. For a short time after conception the uterus remains too little developed to be much under the influence of the predisposing causes of hæmorrhage, which

therefore, at this period, occurs less frequently. Hæmorrhages take place most frequently in the beginning of the third or fourth month; when they appear in the latter half of pregnancy, it is generally in the seventh month; and those which occur at a later period generally depend upon separation of the placenta.

The immediate cause of hæmorrhage during pregnancy generally consists in a separation of the ovum, and rupture of the vessels connecting it to the uterus; but this is not invariably the case; for in the first period of pregnancy the bleeding may proceed from the lower part of the uterus, where it is free from the ovum and decidua; in which case the blood flows from the vessels of the cervix in the same way as occurs in hæmorrhage from other organs, or from the unimpregnated uterus. When the cause of the hæmorrhage is a separation of the ovum from the uterus, this may happen in various ways. (*a*) The impetus of the circulation towards the womb may be sufficient to make the vessels give way; and if this should happen high up in the uterus, the blood might escape between the ovum and the womb, effect a further separation, and interrupt to a greater or less extent the connexion of the ovum with it. (*b*) The vessels may give way in consequence of inflammation or some other diseased condition, and give rise to separation and hæmorrhage; a by no means infrequent occurrence in the puerperal state, if inflammation terminate in suppuration or gangrene. (*c*) Separation may be caused by excessive distension of the uterus without a corresponding increase in the size of the ovum. We notice this occurrence in placenta prævia, in the latter period of pregnancy, when the cervix uteri expands and the placenta cannot follow the exten-

sion. But it is also possible with a natural position of the placenta, if the uterus become much distended by tumors, excrescences, fluid, twins, &c. (*d*) The ovum may be separated by mechanical injury. (*e*) Uterine contraction may produce rupture of vessels; and this is a fact of great importance to be remembered in the treatment of uterine hæmorrhage. If, for instance, the uterus contracts to such a degree that the ovum and particularly the placenta cannot be lessened to the same extent, some part of it will be separated, and blood will escape, especially at the time the contractions intermit; hæmorrhage of this description generally lasts until the contents of the uterus are expelled and the uterus itself is enabled to contract fully; or the contractions may cease for a time, and allow the opened vessels to retract, or be closed by coagulation of the blood or close contact of the ovum. This circumstance shews that the most powerful agent for stopping uterine hæmorrhage may itself also be a cause of it, and should teach us to place but little reliance upon one-sided theories. Irregular and partial contractions of the uterus sometimes occasion most serious hæmorrhages, especially during labour. *Dewees*, who considers separation of the ovum a necessary condition of hæmorrhage during pregnancy, endeavours to prove that *every* exciting cause of metrorrhagia in reality produces not only an increased impetus of blood, but also contractions of the uterus; but the reasons he gives for his opinion are not altogether satisfactory.

Deficient contractile power in the uterus during pregnancy, by which the ovum is less firmly embraced and its intimate relation with the uterine parieties interfered with, may be a cause of abortion and hæmorrhage; and

this want of contractile power is often connected with relaxed uterine structure. Want of uterine contraction is the chief cause of hæmorrhage during and after labour, and may arise in many different ways. 1. From spasmodic affections interfering with the proper action of the uterus. 2. From exhaustion, in consequence of over-exertion; also general and local debility, from whatever cause produced. 3. Contraction may be mechanically prevented, by a portion of the ovum or some other body being retained within the uterus; for instance, when a portion of the placenta is separated and the rest firmly adherent, or when after the removal of the placenta, clots of blood remain in the uterus. 4. Organic diseases of the uterus may prevent its contracting, and thus act as causes of uterine hæmorrhage. An increased impetus of blood may be a cause of hæmorrhage, the contractile power of the uterus being natural but not sufficiently strong to withstand the increased force of the circulation; and perhaps we may venture the suggestion that diseased states of the blood, rendering it a thinner fluid than natural, may increase the disposition to uterine hæmorrhage.

We proceed now to consider the particular kinds of hæmorrhage which may take place during pregnancy.

1. Occasionally *menstruation* continues after pregnancy has commenced, and it may be difficult to distinguish it from hæmorrhage; but when we meet with a periodical discharge of blood taking place in the early months of pregnancy without any particular cause, of moderate extent, and exciting no disturbance to the general health, there will be no practical difficulty in considering it a continuance of menstruation. In these cases the blood appears to be furnished by the vessels

of the os uteri and vagina; but sometimes the loss is sufficient to constitute hæmorrhage, with disturbance to the general health and threatened interruption to the process of pregnancy; requiring the patient to be carefully watched, and placed under medical treatment as soon as symptoms appear which forbode the occurrence of such an accident.

2. *Hæmorrhages during pregnancy without separation of the ovum or placenta from the inner surface of the uterus.* This description of hæmorrhage differs but little from menstruation as to the source from which it is derived; but when it occurs it observes no fixed periods, and generally is preceded by some exciting cause. We believe these hæmorrhages to be more frequent than is generally acknowledged; the loss of blood is often inconsiderable, and may be soon stopped by lessening the force or impetus of the circulation. The diagnosis is very difficult, but the possibility of their existence teaches us, at all events, not at once to consider abortion inevitable in every case of inconsiderable loss of blood.

3. *Uterine hæmorrhage during pregnancy in consequence of a partial separation of the ovum or placenta.* Although we cannot agree with those writers who consider this description of hæmorrhage the only one possible, we must, however, admit that it is the most frequent and the most dangerous which occurs during pregnancy. In the early months, if from any cause, the ovum, or later, after the formation of the placenta, a portion of the chorion, becomes separated from the uterus, blood-vessels must necessarily be opened, and blood will flow until the uterus contracts sufficiently to close them, or they become closed by coagulation. If

the uterus possess a full power of contraction and the separation has taken place slowly, the bleeding will be slight; but in separation of the ovum in the early months, the hæmorrhage will generally be somewhat considerable, because at this time the contractile power of the uterus is but small, and the difficulty of expelling the ovum is increased by the yet undeveloped state of the cervix. For these reasons the quantity of blood lost is greater than one would expect from the size of the vessels, although absolutely less than from hæmorrhage in the latter months of pregnancy, when the vessels have attained a much larger size. Separation of the placenta is at any period one of the most important causes of uterine hæmorrhage, and the loss will be the more active the further the pregnancy is advanced. It may occur, in consequence of some of the before-mentioned causes of uterine hæmorrhage, in any portion of the placenta, and in whatever position the placenta may be placed; but when it is attached upon or near the mouth of the uterus, separation will necessarily take place in the latter period of pregnancy, when the cervix becomes developed and expanded. Hence the division, by *Rigby*, of hæmorrhages resulting from separation of the placenta, into *accidental* and *unavoidable*; a distinction in all respects appropriate, and now generally adopted.

Occasionally, in separation of the placenta, when not in the form of placenta prævia, the bleeding comes on suddenly, unexpectedly, and without a perceptible cause or previous indication of its appearance. This is, however, much more frequently the case in unavoidable hæmorrhages; and we generally find that, in accidental separation of the placenta, there is some

definite exciting cause, as well as symptoms which give warning of the bleeding. Although this may occur at any period after the formation of the placenta, it happens most frequently at those times in which hæmorrhages during pregnancy most frequently occur. Hæmorrhage of this kind may attack the patient in any posture, standing, lying, or sitting; whilst she is pursuing her usual occupations, or lying in bed, or even during sleep. Sometimes the blood flows without pain, and the patient's attention is first directed to it by a feeling of warmth and moisture; at first she ascribes these sensations to the escape of the "waters," becomes greatly alarmed when she discovers that the fluid which escapes is blood, and this mental agitation contributes greatly to the increase of the hæmorrhage. These symptoms more frequently accompany *passive* menorrhagia, in which the separation of the placenta has depended more upon a want of normal adhesion than upon powerful uterine action. The most frequent cause of separation of the placenta, however, may be said to be a strong circulation, with contraction, especially partial, of the uterus; here the hæmorrhage is *active* and takes place under circumstances entirely different from those described. For instance, after the action of some cause which occasions excitement of the circulation, a concussion of the body, or a too powerful contraction of the uterus, the hæmorrhage is preceded by pains of a peculiar kind in the region of the uterus, heat and a dragging forcing pain, similar to labour pains, or by a feeling as if something had given way within the abdomen; loss of blood then suddenly occurs, and the nervous system participates in the disturbance. At first the blood is fluid and of a red colour; but after the

hæmorrhage has continued for some time, and especially when it begins to decline, the blood assumes a firmer consistence, and comes away in clots. Before it stops entirely, a reddish serous fluid escapes, which becomes daily less coloured, and then entirely ceases. The amount of blood lost will depend upon the extent to which the placenta is separated, the force of the circulation, and the contractile action of the uterus. If the vessels of the uterus become closed, by contraction of that organ and coagulation of the blood, the hæmorrhage ceases, and the separated portion of the placenta may again become adherent. But if a larger portion be separated, the hæmorrhage will probably not be stopped in this manner; abortion is then a necessary consequence, and contraction of the uterus cannot take place effectually until its contents are expelled. If the pregnancy continues after hæmorrhage has once occurred, a repetition of it is very likely to happen, and the patient requires to be carefully watched.

It has before been stated that hæmorrhages occurring in consequence of placenta prævia are *unavoidable*, and, as a general rule, this is correct; there are, however, exceptions, for experience has proved that in a few instances the placenta has been completely separated and passed into the vagina without the occurrence of hæmorrhage; and occasionally the vessels may give way very gradually, and become closed by uterine contraction or in some other way, so that hæmorrhage does not follow. Generally speaking, when the placenta is situated at or near the os uteri, hæmorrhage takes place at some period after the seventh month; the statement of *Burns*, that it may occur earlier, is by no means proved; but after this month the cervix or part sur-

rounding the os uteri extends so rapidly in circumference, that a more or less considerable portion of the ovum becomes separated from the uterus, and hæmorrhage is the result. The usual predisposing and exciting causes of hæmorrhage may produce it in this position of the placenta as well as in any other; but in *placenta prævia*, the peculiar situation of the after-birth is of itself a determining cause of hæmorrhage. The symptoms of this kind of hæmorrhage differ according to circumstances. The first loss will seldom be considerable; it soon stops, the woman is but little alarmed, and resumes her usual occupations. After a time, probably two or three weeks, hæmorrhage breaks out afresh, generally to a greater extent than before, but by proper management it may again be stopped. But in course of time the bleedings recur at short intervals, become more violent, and take more effect upon the general organism; they are most severe just before or at the commencement of labour, the blood being at first fluid and afterwards expelled in a coagulated form. The frequent recurrence of the hæmorrhage, the intervals becoming shorter, and the loss increasing in quantity each time, are circumstances which lead to the conclusion that the hæmorrhage is occasioned by a faulty position of the placenta; we must, therefore, ascertain whether there be *placenta prævia*, by an examination, conducted very carefully, so as not to increase the hæmorrhage by irritating the uterus or separating to a greater extent the placenta. These hæmorrhages are generally so violent, that, if left to nature, they will almost always lead to a fatal termination.

4. *Hæmorrhage during labour from parts belonging to the ovum.* In every case of separation of the ovum,

a flow of blood takes place from its vessels, but to an inconsiderable amount compared with hæmorrhage from the vessels of the uterus. It is very difficult to determine how much of the blood escapes from the ovum and how much from the uterus, or whether the vessels of the latter can become closed and those of the former furnish all the blood that may be lost; we must therefore limit *Hæmorrhagia fœtalis* to those cases in which the blood escapes from the internal membrane of the ovum and navel cord, and is not discharged until the membranes or cord are ruptured during labour. We shall treat of them under hæmorrhage during labour.

5. *Hæmorrhage accompanying abortion.*

6. *Hæmorrhage occurring as a symptom of mole pregnancy, extra-uterine pregnancy, uterine or ovarian dropsy*, depends partly on the anomalous changes taking place in the interior of the uterus, and partly on separation of the ovum; it occurs often without any external cause, and frequently at more or less determinate periodical intervals.

In addition to this description of the proximate causes and symptoms of uterine hæmorrhage during pregnancy, we shall here observe that the *occasional* causes are the same as those before described as belonging to uterine hæmorrhages in general. The principal are, the too early or too advanced age of the patient; all circumstances that disturb the circulation and produce congestion of the uterus; concussions of the body, producing separation of the ovum; whatever excites abnormally the contractile power of the uterus; distension of the bladder and rectum; obliquity or prolapsus of the womb; deformity of the pelvis; diseases

of the abdomen ; exostoses ; injuries or diseases of the uterus ; rupture of the uterus during pregnancy, &c.

The *prognosis* of uterine hæmorrhage during pregnancy depends so much upon the cause which has produced it, the constitution of the patient, the quantity of blood lost, and other accompanying circumstances, that no general rule can be laid down respecting it. Sometimes the hæmorrhage is of so little consequence that the patient is not at all hindered by it, but pursues her wonted occupations ; nature alone effects the cure, and even repetitions of the bleeding seem to be productive of no injurious results. At other times, the danger is great and immediate, and the woman, who just before was strong and well, is suddenly prostrated and perhaps irretrievably lost. This difference in the nature of the attack exercises considerable influence upon the prognosis, and seems to depend upon the part which the nervous system takes in the process of pregnancy and in the metrorrhagy. Thus, the sudden appearance of danger is particularly frequent in nervous, sensitive women, and less so in those who are plethoric and inactive. Nevertheless, it does not always happen that weak patients suffer the most from uterine hæmorrhage ; on the contrary, we often find such persons less affected and recovering more quickly than excitable sanguineous subjects. We cannot, therefore, predetermine what influence an attack of hæmorrhage will have upon this or that subject ; and we frequently find that one and the same woman will at one time bear considerable loss without injury, and at another be severely affected by an hæmorrhage of comparatively small amount. It is our duty, therefore, to examine thoroughly the circumstances and constitution of the patient *in each particular*

case, and thereby estimate the danger of the bleeding. If the general condition of the patient is but little disturbed during the hæmorrhage, the danger is not great, and we ought not to have recourse to those measures of interference which are admissible only when the object is to put an immediate stop to the hæmorrhage in order to save the life of the patient. On the contrary, if the strength fail quickly, and the constitutional symptoms before described as dependant upon loss of blood make their appearance, the prognosis is unfavourable, and it will be necessary to prevent any further hæmorrhage. The greater or less strength of the patient has therefore less influence on the prognosis than is generally admitted, and we must depend principally upon the appearances presented by the general organism. In forming a prognosis, the following circumstances are also to be considered: passive hæmorrhages are, as a rule, more dangerous and difficult to treat, and recur more frequently, than active; but if the latter be of frequent recurrence the prognosis cannot be otherwise than unfavourable. The occasional causes have also an influence upon the prognosis; the more intense they are, and difficult to remove, the more unfavourable the prognosis. A predisposition to metrorrhagia is an unfavourable circumstance, because there will be greater difficulty in stopping the bleeding, and a relapse can seldom be effectually prevented. As regards the period of pregnancy, physicians generally have confirmed the statement of *Puzos*, that hæmorrhages occurring before the fifth month of pregnancy are seldom fatal; and that generally speaking the danger from hæmorrhage is so much the greater the further the pregnancy is advanced, because the vessels are increased in size, and a much

greater quantity of blood will be lost in a given time ; although there is more probability of hæmorrhage occurring in the earlier months. But the comparative danger from hæmorrhage in the earlier and later months does not stand in precise relation to the enlargement of the vessels, for during the first half of pregnancy we cannot employ the same mechanical remedies which are applicable at a later period ; and in addition to this difficulty, there is less contractile power in the uterus, and, consequently, nature is less effective in stopping the flow of blood than at a later period. Hæmorrhages in the second half of pregnancy are most dangerous when dependant upon abnormal position of the placenta ; they are then very active and difficult to restrain, and, owing to their frequent recurrence, become particularly dangerous to life, especially if proper assistance be not afforded at the right time. If the bleeding comes on without pain, and is at all considerable, the prognosis is unfavourable, because it shews that the uterus is in an atonic condition and unable to stop the hæmorrhage. When pains like labour have existed at first, but afterwards cease, and the bleeding continues, the prognosis is particularly unfavourable. In symptomatic hæmorrhages the prognosis is favourable, provided the disease of other organs occasioning the hæmorrhage can be easily removed ; under opposite circumstances, it is otherwise.

The prognosis of hæmorrhage complicated with spasmodic action of the uterus, organic diseases of the womb, tumors, scirrhus, polypi, and other excrescences, or by abnormal position of the uterus, &c., is always more unfavourable than in the absence of these complications. Hæmorrhage accompanying abortion or mole

pregnancy, is threatening, unless soon stopped by the expulsion of the contents of the uterus, and this under such circumstances is very difficult. *Hæmorrhagia foetalis* admits of a favourable prognosis as regards the mother. In the prognosis of hæmorrhage during pregnancy, the foetus is also to be taken into account, for this may be more or less weakened or even killed by the loss of blood. We have stated that hæmorrhage in the first half of pregnancy is not so dangerous to the mother as afterwards; the prognosis with reference to the foetus is quite the contrary, the death of the foetus being a very common consequence of hæmorrhage in the first four or five months, whilst later its life will be more likely to be preserved. The subsequent evils resulting from hæmorrhage have likewise to be considered, and consist of the following: general debility, cachexia, chronic inflammation, softening, and organic changes of the uterus; nervous diseases, long-continued fluor albus, dropsy, sterility, &c. The precursory signs of death consist of lividity of countenance, sunken eyes, imperfect vision, nausea, vomiting, faintings, noise in the ears, yawning, loss of pulse, coldness of the extremities, partial cold clammy sweats, singultus, hic-cough, &c.

In reference to the injurious consequences of loss of blood, it is of importance to inquire whether, after separation has taken place between the ovum and uterus, it is possible for the separated surfaces to become again united. Opinions differ as to the possibility of a fresh union; we believe that in many cases no reunion takes place, that the normal connection between the placenta and uterus is not again formed; but that in some it is again established, the coagula which have been formed

being reabsorbed and the uterine vessels again communicating with the cells of the placenta, so that after labour no trace of the former separation is to be discovered. At all events, even if a complete reunion does not take place, experience proves that when the separation has not been considerable, the ovum may be retained in the uterus, the hæmorrhage may cease, and pregnancy continue to take its natural course.

[Another form of Uterine Hæmorrhage, of a severe and threatening nature, I have every now and then encountered in practice, but do not remember to have seen it fully described by authors, if indeed at all referred to. The nature of it is undoubtedly obscure, but the following are the appearances which I wish to direct attention to, and by which this peculiar form of hæmorrhage may be recognised. I had met with it several times before I could duly appreciate it, or dispossess my mind of its being connected with the approach or existence of serious organic change. It occurs at a period of life bordering upon or subsequent to that at which menstruation ceases, and when organic disease is most likely to take place; and I have seen it in persons under fifty, and beyond sixty, years of age. The loss at first simulates ordinary menstruation, but after a few days becomes more strictly a hæmorrhage, a considerable quantity of fluid blood escaping and giving rise, in persons not too advanced in years, to the idea that possibly an abortion or miscarriage is about to happen. No fœtus, however, makes its appearance; but blood continues to flow, now in a more coagulated form, and accompanied, it may be, with imperfect and somewhat painful uterine contraction. At this stage of the complaint, the nervous system of the patient begins to sympathize, a medical adviser is called in, and much anxiety is betrayed to gain from him an explanation of the unexpected cause of alarm. He finds his patient pallid, anæmic, frightened it may be, or else calmly resigned to what she believes to be destined to put a termination to her life; he finds evidence of considerable uterine hæmorrhage, and feels that his patient's fears as to the issue of the case are not groundless if his attempts to stop the loss should prove unsuccessful. On examination, *per vaginam*, he finds the os uteri patent, and in some of its extent flabby; but anteriorly he feels a portion of its circumference thicker and firmer, and there is sometimes a sensation as if some body within the uterus were presenting and

ready to escape. This he may mistake for an ovum; or else the thickened anterior lip may convey to him an impression that organic change, or malignant deposition has commenced, and that the hæmorrhage is but a forerunner of a succession of distressing symptoms, than which nothing can be more hopeless as to relief from medical art, or more certain to issue in a loathsome and fatal disease. Until I became more familiar with the affection, I used to fear the symptoms portended scirrhus uteri in an early stage; but the results obtained by careful watching and treatment dismissed the apprehension from my mind, and taught me to consider it a treatable disease, although I could not and cannot now determine what was the precise cause of the hæmorrhage. By adopting a mode of treatment, local and constitutional, suited to hæmorrhage from other general causes, especially that of applying a sponge tent soaked in cold vinegar and water to the os uteri, I have found, by subsequent examinations of the state of the uterus, that the hardness and thickness of the anterior lip depended upon that portion of the cervix being less relaxed than the rest; and that gradually the rest of the circumference became thickened and firmer to the touch, until indeed the whole cervix assumed a like size and consistence, or nearly so, the posterior lip generally remaining thinner in some degree than the anterior; there has been in fact relaxation and patency of the cervix and os uteri in all directions but one; and on curing the hæmorrhage, the other portions were found to have resumed their natural contraction and dimensions, and the idea of malignant thickening of the anterior lip of the os uteri has proved to be without foundation. I imagine this form of hæmorrhage to arise from two different conditions of the system; first, from an active congestion of the uterus for want of proper attention to diet and exercise after the period of menstruation, a period of life when perhaps greater indulgence in living and more indifference to exertion may tend to general plethora; and secondly, to a generally relaxed state of system dependant upon debility occasioned by frequent abortions and deliveries, when the uterus may be too weak or too indifferent to place itself in the condition it ought to assume when no longer required to perform its proper functions. The muscular fibre is relaxed, the usual quantity of blood flows into its vessels; and as it does not possess the power to lessen their size by the contraction which it ought to assume at this period, an efflux of blood occurs to relieve them of their load, and it goes on flowing beyond the quantity required for this purpose, because no effort is made to close the vessels. As a means of stopping the hæmorrhage locally, I have found nothing equal to a sponge tent dipped in vinegar and

water; and the constitutional remedies required must depend upon the nature of the hæmorrhage, whether it be active, or of the passive character last described. In the former, restricted diet and saline aperients will be required; in both kinds, absolute rest: and in the latter, gallic acid, cinnamon, tincture of muriate of iron, catechu, or other vegetable or mineral tonics and astringents. I have known this kind of hæmorrhage prove to be the last effort of menstruation, no return of that function, or of that of conception, taking place afterwards. I have known it concurrent with irregular menstruation, returning two or three times after intervals of a few months, and then entirely ceasing. And I have witnessed it occasionally in older females who had long ceased to menstruate, but whose lives were in danger from the persistence and severity of the loss, and in whom the peculiar condition of the os uteri conveyed to the practitioner, during vaginal examination, the impression that the hæmorrhage was dependent upon the presence of malignant disease of the cervix, and a feeling of surprise at an unexpected and complete recovery.]

Treatment. In the treatment of uterine hæmorrhage it is of the first importance that we make ourselves thoroughly acquainted with the condition of the uterus. An examination is indispensable in every metrorrhagy at whatever time it may happen, but especially when it occurs during pregnancy and labour; for in these conditions, the accompanying circumstances have a great influence over the bleeding. It must, however, be conducted very carefully, so that the loss may not be increased by unnecessary excitement of the uterus; and sufficient information should be obtained by one examination to render a second unnecessary. Before we proceed to the treatment, we shall say a few words about the mode by which nature effects the cure of hæmorrhages. 1. When blood has been escaping for some time, so that it flows with diminished force; or when the same effect is produced by approaching syncope, it may coagulate and thus fill up the mouths of the bleeding vessels. 2. The vessels themselves may

retract, as in hæmorrhages from other organs, so that their orifices are diminished. 3. The uterus may contract, and close the vessels by embracing its contents more firmly, thus affording a mechanical impediment to the flow of blood. 4. Coagula may form in the cavity of the uterus, or between its inner surface and the separated portion of the ovum, and, by contact, close the bleeding vessels. In these different ways nature put a stop to uterine hæmorrhage; and it will be right to imitate her, although we must also employ other methods of cure from time to time according to circumstances. It may appear remarkable that contraction of the uterus should be both a cause and a means of cure of uterine hæmorrhage, yet we find almost all writers agree in the assertion, and experience corroborates it. We have already explained how contractions of the uterus *occasion* hæmorrhage, namely, by causing separation of the ovum without closing the vessels, and producing congestion of the womb: this happens especially when they are partial, affecting a portion only of the uterus; but they *stop* hæmorrhage when they close the open vessels, or press the ovum firmly against the inner surface of the uterus.

The behaviour of the physician in the treatment of uterine hæmorrhage, where it is often necessary to employ without the least delay remedies in themselves of a dangerous nature, and where the anxiety, apprehensions and false notions of relations or friends place so many impediments in his way, is of the greatest importance; and we cannot do better than quote the following words of *Burns*, which deserve the most serious consideration of junior practitioners. “There is no disease to which the practitioner can be called, in which he has greater

responsibility than in uterine hæmorrhage. The most prompt and decided means must be used; the most patient attention must be bestowed; and whenever he undertakes the management of a case of this kind, whatever be the situation of the patient, he must watch her with constancy, and forget all considerations of gain and trouble. His own reputation, his peace of mind, the life of his patient and that of her child, are all at stake. I am doing the student the most essential service, when I earnestly press upon his attention these considerations. And when I entreat, implore him, to weigh well the proper practice to be pursued, the necessary care to be bestowed, I am pleading for the existence of his patient, and for his own honour and happiness. Procrastination, irresolution, or timidity, have hurried innumerable victims to the grave; whilst the rash precipitation of unfeeling men has only been less fatal, because negligence is more common than activity."

In these cases, the practitioner must act with decision, his directions must be given explicitly, the bystanders must be warned of the danger of neglect; he must not leave his patient until the hæmorrhage has either nearly or entirely ceased, and even then he should give strict injunctions to be sent for on the instant should any recurrence of the bleeding take place, and that the patient be not disturbed by untimely consolations, or offers of needless and unprofitable assistance. Here the greatest energy is required on the part of the physician, that he may carry into effect the opinion he has formed in a case which excites disquiet in his own mind; that when doubts arise he may have power to conceal them from those around him; and when he

thinks it advisable not to take upon himself the sole responsibility of the case, it is his duty to inform the relatives of the danger, and to give them to understand that he cannot answer for saving the life of the patient, though the means employed be ever so appropriate.

The indications of treatment in uterine hæmorrhage vary according to the character, causes, and other particulars of the case ; but the following directions should be attended to, and will be found useful in every instance. The patient should at once be laid in the horizontal posture, with the hips raised, and covered not too warmly with bed-clothes. A mattress, or in the case of poor people, a straw-bed, is always to be preferred to a feather-bed, and care should be taken to have proper linen, oil-cloth, &c. laid under her to prevent the bed being soiled, and that the patient may easily be kept dry ; a cushion should be placed under the hips, partly for the purpose of elevating them, and also to render the position of the patient more convenient for the manipulations of the accoucheur.

The patient's mind should be kept free from apprehension, and her body quiet and undisturbed by noise and strong light. Persons who are unable to render assistance ought to be excluded from the room, particularly such as cannot refrain from talking and disturbing the mind of the patient by their conversation. We should rather endeavour to cheer her and inspire her with hope, at the same time that we represent to her the danger of disobedience to such directions as we feel it right to give her. There is a prevalent opinion that women suffering from uterine hæmorrhage should not go to sleep, and therefore sleep is often carefully prevented by the bystanders ; but this cannot be otherwise

than prejudicial to the patient by disturbing her repose, and is founded upon the idea that if the bleeding returns whilst the patient is asleep, it may go on for some time without being discovered; a circumstance very unlikely to occur if she be properly watched, and not of sufficient importance to justify us in disturbing that sleep which in other respects is so advantageous to the patient.

[Nothing can be more injudicious than trying to prevent sleep in a patient suffering from uterine hæmorrhage, for it is often the very means adopted by nature for putting a stop to the loss. From frequent experience of the beneficial effects of sleep in cases of post partum hæmorrhage, I am inclined to believe it a most favourable occurrence, and almost always followed by a good result. The anxiety of mind which must necessarily be experienced by a person feeling herself in a state of extreme exhaustion, and anticipating an untimely removal from the relations and friends whom she sees anxiously watching around her, is sometimes a great impediment to that degree of uterine contraction which is necessary for her safety, and which I have known repeatedly to take place immediately on the supervention of a sound sleep. The fear that hæmorrhage may be going on unobserved, is no argument against this necessary repose; as it is quite as possible, and every whit as much the duty of the accoucheur or nurse, to watch the patient while she is sleeping as when she is awake.]

The room should be cool rather than heated, and whatever is taken should be cold. When the hæmorrhage is slight, this treatment will often be sufficient to stop it, and in all cases it will moderate the flow. The particular treatment of cases of metrorrhagia differs according to the circumstances under which the bleeding occurs; this we shall now proceed to demonstrate, and afterwards discuss separately each method that has been recommended. A thorough investigation into the character of the hæmorrhage can alone lead to the selection of suitable remedies.

(a) *Treatment of active uterine hæmorrhage.* Here the principal indication is to moderate excitement of the circulation and remove congestion of the uterus; but this will be sufficient only when the hæmorrhage is simple, and unconnected with separation of the ovum or any other diseased condition of the uterus. Venesection has generally been proposed as the best remedy; but those writers who have expressed themselves in its favour, have not been sufficiently precise in their explanation of the signs which indicate the necessity for it. Their recommendation of it, however, is generally coupled with a caution as to the extent to which it should be carried; and whatever theoretical arguments may be adduced in favour of it, no practitioner ought to resort to it without considerable judgment and care. An active flow of blood, such as takes place from other organs, very seldom happens from the pregnant uterus; and if the hæmorrhage comes only from the lower free portion of the uterus, it rarely occurs to a sufficient extent to require venesection to subdue it. As the result of our own experience, we propose the following rules for the employment of blood-letting in metrorrhagy during pregnancy. In very robust and plethoric individuals, where there is much general excitement as well as an apparently congested state of the uterus, and where the quantity of blood flowing from the uterus is but small, the abstraction of a proper quantity of blood from the arm will afford temporary relief: in such cases blood-letting may be practised freely, and repeated if necessary; but they are of very unfrequent occurrence. When there is but little general excitement, but a decided tendency to congestion of the uterus, the pulse may be even small and contracted, and the extremities

cold, from the equilibrium of the circulation being disturbed; in such a case, if the hæmorrhage be slight, a small bleeding may be beneficial as a revulsive; but when, under these circumstances, the hæmorrhage itself is active, we may dispense with venesection even to this extent, for by the hæmorrhage itself the pulse will rise and the circulation become free. Such cases as these are also of rare occurrence. If, with a moderate degree of general excitement, a more severe uterine hæmorrhage occur, venesection will be quite useless, unless we have to fear abortion from the presence of uterine pains; in which case venesection will be required to relieve the congestion which has given rise to uterine contractions. But here the object of the venesection is to prevent abortion, and if we find that this can no longer be obviated, it is useless to draw blood. Venesection is, therefore, especially indicated when hæmorrhage is produced by some stimulating exciting cause and kept up by congestion of the uterus. Beyond this it is to be made use of as a remedy for metrorrhagy only when the general excitement which is present is of itself sufficient to require it, or when, in consequence of determination of blood to the pelvic organs, we wish to employ it as a revulsive. If blood flows in large quantity from the uterus, venesection is altogether contraindicated, for it will then not be able of itself to stop the hæmorrhage, neither can we tell beforehand how soon we may be able to restrain it by other means. We cannot know how much blood will be lost; severe general disturbance of the nervous system may quickly supervene, and by having recourse to venesection we may easily increase the danger. The use of the lancet therefore requires the greatest judgment, and the phy-

sician will do well never to resort to it but with care, and strict personal observation of its effects.

As a general rule, it is sufficient in a case of active hæmorrhage, unless we want to subdue contractions of the uterus, to prescribe an easy horizontal posture, cooling regimen, and the use of those remedies which diminish the force of the circulation. Nitre has been especially recommended; *Zuccari* advises it, in conjunction with strict regimen, in large doses, from 4 to 6 drs. in twenty-four hours in a solution of gum Arabic; he says he has made numerous trials of this remedy; that it has often succeeded when other means have failed, and has not been attended with any injurious consequences. *Goupil* cured a severe uterine hæmorrhage with large doses of nitre after several remedies had been tried without effect. He ordered on the first day two, on the second day three, on the third day four scruples for a dose three times a day, whereupon the bleeding ceased. We object, however, to the use both of nitre and all other neutral salts *in large doses*, because of their prejudicial effect upon the alimentary canal. In hæmorrhage during pregnancy, we can never reckon with certainty when the flow of blood will cease, and ought therefore carefully to avoid everything that produces the least injurious effect upon the constitution; least of all should we excite a derivation to the stomach and bowels, for excitement of these organs may be easily transmitted to the uterus, and the condition of the patient be rendered more precarious. If the hæmorrhage be accompanied with general febrile disturbance, it will be proper to give the neutral salts in smaller doses, namely, two drams of nitre in twenty-four hours, so long as the fever continues.

If the hæmorrhage be considerable, and the nervous system participates in the disturbance, leading to a depressed state of the system, we must have recourse to such remedies as will support the strength and produce quietude, at the same time that they tend to stop the bleeding. To these belong the mineral and vegetable acids, acetic or citric acid, sulphuric acid, phosphoric acid in small doses, diluted with some mucilaginous vehicle. When the nervous system is much disturbed, antispasmodics and especially the *aq. laurocerasi*, opium, belladonna in small doses, &c., may be properly combined with antiphlogistic soothing remedies. For the treatment of active hæmorrhage from the uterus, no other means than those above described will at first be required; and if we find the loss diminishing and the patient not much weakened, they should be continued as long as the bleeding continues; further interference being necessary only when the circumstances occurring within the pregnant uterus are of a nature to demand it.

(b) *Treatment of passive uterine hæmorrhage.* The same general rules relative to the management of hæmorrhage are here also to be observed, and, in slight cases, will often be sufficient for the cure; but when the bleeding continues, or if it begins with such violence that dangerous symptoms arise, it is absolutely necessary to put a stop to it; and we must endeavour to fulfil this indication by exciting uterine contraction, or coagulation of the blood in the bleeding vessels. Several remedies, both internal and external, or mechanical, have been recommended for this purpose; and since the choice of them requires great judgment on the part of the practitioner, in order to suit them to the special difficulty of each case, it will be necessary to

discuss them fully and explain their action clearly, although we are of opinion that in hæmorrhages during pregnancy the operative proceedings we have still to treat of should be resorted to only in extreme cases.

Internal. Some practitioners place but little confidence in internal remedies, and give them only as *placebos* or because it is the custom to do so; but we think, although they cannot be depended upon alone, they are often useful in combination with external measures. The medicines belonging to this class are,—

1. The mineral acids, which are useful in all cases in which the hæmorrhage is not very severe, and when the object is to close the vessels by coagulation rather than by exciting uterine contraction. Their action is also composing as well as astringent, and they are therefore applicable to cases in which, together with hæmorrhage from ruptured vessels, general excitement is also present. Next to the mineral acids stands alum, but it has no specific action upon the uterus, and is suited to hæmorrhage of a more chronic character in conjunction with other remedies. The preparations of iron and lead have also been recommended, but are not much to be depended upon in metrorrhagia connected with pregnancy; the former may be given in cases where the patient is delicate, the loss of a chronic character, and the uterus itself in a very relaxed condition.

2. There are other medicines, such as cinnamon, rhatany, secale cornutum and savine, which are of more importance, because they exert a specific action upon the uterus. Cinnamon stimulates the uterus and has the power to excite it strongly to contraction; it is therefore applicable to cases in which it is desirable to cause the uterus to contract, especially where there is depression

of the nervous system; and it may be given in doses of twenty to forty drops of the tincture in water or wine, or in combination with other remedies. Rhatany appears to be an effectual remedy for controlling uterine hæmorrhage, for which purpose it was first recommended by Hippolito Ruiz in 1808. It excites contraction in a less degree than cinnamon, and acts principally upon the uterine vessels as a direct astringent; it is therefore to be preferred in cases in which we are desirous, if possible, to prevent abortion. The best preparation is the decoction of the root; but as it takes some time to prepare, it is not suited to cases of immediate danger. The secale cornutum, which has been so generally acknowledged to have the power of exciting labour pains, would naturally be recommended and found useful in uterine hæmorrhage. We consider it a very valuable remedy, constant in its effects, and not, as many have believed, prejudicial to the life of the fœtus; it acts as a remedy for hæmorrhage by promoting contraction of the uterus, especially of the fundus, and exciting expulsive efforts. It is therefore suited to those cases of hæmorrhage during pregnancy in which the object is to bring on contraction, and promote the expulsion of the contents of the uterus; but it is contra-indicated in cases where abortion is to be prevented, although we may here remark that it does not increase the expulsive power of the uterus during pregnancy so much as in labour at the full period; and we have seen cases in which ergot has been given in strong doses for hæmorrhage during pregnancy, with the effect of stopping the loss without interrupting the pregnancy. The use of the secale cornutum is also inadmissible in cases of placenta prævia in the latter months of pregnancy, because by

exciting uterine contraction we necessarily increase the hæmorrhage; also in cases where the metrorrhagia is accompanied with convulsions, rheumatic uterine pain, sympathetic lesion of the stomach, and general excitement. This medicine acts powerfully when fresh, but loses its strength after a time more or less, especially if exposed to the air or kept in a damp place; it is most powerful when gathered as soon as it has attained about half the size it does when fully developed, and may be given either in powder or infusion; of the former, from five to ten grains every hour till the bleeding ceases; of the latter, made by infusing one or two drams in four ounces of water, a table spoonful every two or three hours: the infusion is preferable because it may be given with the mineral acids, a combination which we have found very effectual. Larger doses are only to be recommended in hæmorrhages during labour, for during pregnancy they may easily affect the constitution injuriously. Various other medicines have been recommended in hæmorrhage during pregnancy, but those above described will be found sufficient where the object is to produce contraction of the blood-vessels or of the uterus.

(c) *Treatment of spasmodic or dysdynamic metrorrhagies.* This kind of hæmorrhage may be either active or passive, the spasmodic symptoms being merely complications which demand attention according as they are more or less developed. The remedies employed for their removal must be in conformity with the state of system which accompanies them, whether of excitement or depression. *Opium* has been recommended in uterine hæmorrhage by all the best accoucheurs, Duncan, Rigby, Hamilton, Gooch, Burns, Dewees, and many

German physicians; and its utility, when properly employed, has been fully proved. In all cases which are accompanied with excitement of the uterus or of the nervous system in general (and this may take place even in passive hæmorrhage) opium in full doses is much to be recommended in combination with other more direct means; the excitement which exists, and which never fails to increase the hæmorrhage, will be more securely and quickly removed, and the efficacy of other remedies increased. Where the excitement is accompanied with pains like labour without separation of the ovum having taken place, and the object is to prevent separation and abortion, opium in full doses may be administered; as well as in all cases in which there is cramp of the uterus, declaring itself by partial, irregular, and very painful contractions of this organ. It is also useful in cases of placenta prævia in the latter months where the expansion of the neck of the womb produces hæmorrhage, by checking the development of the uterus; but, on the contrary, opium is to be avoided in all cases of real atony and relaxation of the uterus, in those in which complete separation of the ovum has taken place, and when abortion appears not only unavoidable, but necessary for the cure of the hæmorrhage. Other narcotics, such as hyoscyamus, prussic acid, digitalis, belladonna, &c., may be given, and even preferred, according to their individual mode of action, when we are desirous of producing quietude without at the same time checking the contractions of the uterus.

When great debility is present, either primarily or in consequence of the hæmorrhage, and connected with an adynamic state of the uterus, the employment of stimulants is indispensable; and although they may not stop

the bleeding, they will increase the effects of astringents and prevent immediate danger from exhaustion. The medicines recommended for this purpose are, ammonia, æther, naphtha, valerian, castor, camphor, musk, and even phosphorus, from one-eighth to one-quarter of a grain dissolved in æther or triturated with ol. amygd. d. and gum Arab. In addition to these internal remedies, it will be proper in all severe cases of hæmorrhage, especially in those which occur after the expulsion of the contents of the uterus, to employ *external* means which act directly upon the uterus. We shall here notice the several means advised, as to their effects and application in pregnancy.

1. Friction on the abdomen over the uterus, if properly managed so as to grasp the uterus with the outspread fingers, is a valuable means of promoting uterine contraction, and easily regulated so as to produce the degree of effect required. It is applicable, also, to almost all cases of metrorrhagy, the exceptions being, in the first months of pregnancy whilst the uterus remains within the pelvis, when the uterus is inflamed, and when the hæmorrhage depends entirely upon an excited or congested state of the womb.

2. The application of cold water, snow, or pounded ice to the abdomen and genitals, or within the vagina, is so generally employed that, as Dewees observes, it is almost injurious to the reputation of a physician if, in the treatment of hæmorrhage, he omit to apply cold. But however effectual it may be, we believe that it, like every other method, does not admit of indiscriminate application; and that there are certain circumstances which indicate, and others which contra-indicate, its employment. These circumstances have, however, been

very differently estimated ; and from the variety of opinion expressed by authors of considerable reputation, it would seem very difficult to point out distinctly the indications for its use. In applying cold we have to consider the temperature of the water, the quantity of moisture, the frequency of its application, the time during which it should be continued, the extent of surface to which it should be applied, the circumstances of the hæmorrhage, and the constitution of the patient. The advantages to be expected from the use of cold depend upon the following effects : (1) it causes contraction of the organic textures ; (2) it favours coagulation of the blood ; and (3) it temporarily diminishes the flow of blood to the parts to which it is applied. To produce these effects it is necessary that the temperature be low, the cold applied as near as possible to the bleeding vessels, and over a sufficient extent of surface ; and there must be a frequent repetition of the application, otherwise the water will partake of the warmth of the body and reaction will be the consequence. The cases which appear to us to be best adapted for the use of cold, are those in which the hæmorrhage is caused by separation of the ovum, but in which it does not necessarily follow that abortion will be the consequence ; and such as occur, without separation, in constitutions neither very strong nor very weak. When abortion is inevitable, our attention will be especially directed to clearing the uterus of its contents ; but if the loss be very great, and the expulsion of the contents of the uterus cannot yet be accomplished, cold should be employed as a temporary remedy to produce coagulation of the blood. In hæmorrhage of an active character occurring in a very plethoric patient,

the sudden and powerful application of cold might produce reaction and inflammation of the uterus or other abdominal organs; so that, in such a case, a bleeding should be practised to subdue the force of the circulation before applying the cold. In very weak subjects, the continued application of cold at a low temperature might interfere with the vitality of the parts, and here the cold *douche* will sometimes afford effectual and speedy results. In very excitable persons there is a fear of convulsions, &c., being produced by the severe application of cold, especially if introduced into the vagina; under these circumstances, should the continuance of the danger render the employment of cold indispensable, it must not be used at a very low temperature nor over a large extent of surface. In every case, the patient should not be more wetted than necessary, the cold applications should not be continued for too long a time, and when no longer required should be left off gradually, allowing the natural temperature of the parts to return by degrees. If a sponge or piece of linen has been introduced into the vagina, it should be allowed to remain some time after the hæmorrhage has stopped, lest by removing it we mechanically interfere with the blood-vessels.

3. Some few have advocated warmth externally; but this requires judgment, and may do much harm: it is applicable only to cases of exhaustion.

4. Stimulating applications externally may sometimes do good, either as derivatives or by exciting the uterus to contract; they are adapted to feeble subjects with *adynamia uteri* and a tendency to spasmodic symptoms. As a revulsive, *Velpeau* particularly recommends the use of sinapisms between the shoulders. He used them

in a great many cases, and satisfied himself that it was the most powerful and useful means of revulsion.

5. It has been attempted to increase the contractile power of cold by means of astringents, as vinegar and water, the mineral acids properly diluted, the preparations of lead, iron, and zinc in solution, decoctions of vegetable astringents, &c. These are either used as injections or introduced into the vagina with a sponge or linen, but cannot be much depended upon.

6. Bands tied firmly round the extremities have been recommended for stopping metrorrhagia; but this is a method that cannot be depended upon.

7. *The Tampon.* It is evident that, in hæmorrhage from the womb, to stop up the outlet by which the blood escaped would, at a very early period, have suggested itself as the most natural and simple mode of stopping the loss. So there is no doubt that the tampon was used in the earliest times; *Hippocrates*, *Moschion*, *Paulus Ægineta*, and *Fab. Hildanus* make frequent mention of uterine plugs moistened with astringent fluids. Neither has the remedy at any time been laid aside, for after *Hildanus* we find that *Trioen*, *Smellie*, *Ranchin*, used an astringent pessary as a plug; the tampon was also used in the time of *La Motte*, and is extolled by *Portal*, *G. de la Tourette*, and others. This remedy, however, was more particularly recommended by *Leroux*, because it is very simple, requires no long preparation, and is procured as readily in the cottage of the poor as in the mansions of the rich. His plan, which some have termed *Leroux's method*, was to make a plug with pieces of linen, hemp, or flax, to dip it in vinegar, and introduce it into the vagina; or, should circumstances require it, even into the uterus. He reports his having

employed this means for thirteen or fourteen years with success even in desperate cases, and that it was never attended with any inconvenience. The propriety of this method, however, has not been acknowledged by all. *Demangeon* has strongly contended against the use of it, as also *James, Millot, Stewart, &c.* By most modern writers, however, it has been recommended in severe hæmorrhage; and their opinions differ only as to the mode of employing it, and the circumstances under which it appears to be indicated.

In slight hæmorrhages, gentle plugging will be sufficient; but when the gush of blood is very great, the whole vagina must be firmly plugged in order to control it. In the former case, it is very effectual and leads to no injury; but when it is necessary to fill the vagina completely, the following evils are to be feared: (1) the occurrence of irritation in consequence of the pressure, which may produce syncope or convulsions; (2) the occurrence of inflammation of the uterus or some other abdominal organ, if the patient be very plethoric and there be much congestion of the womb; (3) internal hæmorrhage. We should therefore avoid the use of the tampon in those cases in which great general or local irritation exists, at least until this has subsided; or where the uterus is very relaxed and the hæmorrhage so violent as to preclude the hope that preventing it from flowing externally will effectually stop its exit from the vessels themselves. In the former case, we have to fear inflammation; in the latter, internal hæmorrhage. But when the flow of blood is less rapid, and the hæmorrhage obstinate and long continued, so that exhaustion is threatened and it seems of importance to the life of the patient that every drop of blood should

be saved, plugging is indispensable and the surest means of preserving life. Even in those cases in which excitement of the circulation occasions fears of injurious consequences, and yet the hæmorrhage appears dangerous, we can and must, together with the use of composing remedies, have recourse to the tampon; taking care to watch the patient, in order to combat any unfavourable symptom as soon as possible. If from the violence of the hæmorrhage the use of the tampon is likely to be followed by internal hæmorrhage, and yet it seems necessary to put an immediate stop to it, we must not hesitate here also to stop up the vagina, especially when the tampon can be applied directly to the bleeding vessels; but in this case the tampon must be removed on the first appearance of an internal bleeding, or as soon as the uterus is by any other means stimulated to contract, in order to allow the accumulated blood to escape. When this is done with judgment, there will not be much fear of a return of bleeding; and if there is not too large a quantity of coagulated blood in the uterus and vagina, and not much blood flowing out, the coagula may be allowed to remain undisturbed until they are expelled by uterine contraction. In plugging, we may either fill up the entrance of the vagina to about an inch of the passage, or the whole canal, or even introduce the tampon within the mouth of the uterus. We employ either a sponge previously dipped in water or vinegar, and then introduce it into the vagina; or a linen plug rolled up to a size corresponding with the capacity of the vagina, tied round a few times with string, and leave several inches hanging out; or a plug of charpie rolled into a moderate-sized ball with a long string attached to it, may be first

introduced, and then the rest of the vagina filled up carefully with loose charpie. The latter kind is the best in severe hæmorrhages; in slight cases, the sponge is recommended as the most simple. Moistening the tampon with astringent fluids, when there is no particular circumstance to contra-indicate it, is a very good plan, as is also the proceeding adopted by *Burns*, of wrapping a piece of ice in the first piece of linen, so as at the same time to have the benefit of cold to arrest the bleeding.

In addition to the remedies which are employed to fulfil the principal indication, the putting a stop to the loss of blood, it is necessary to consider, in every case, the general symptoms which may arise during, as well as shortly before and after, the metrorrhagia; and to remove them by suitable medicines, provided the latter do not appear on other grounds to be contra-indicated. When general excitement is present at the commencement, cooling composing remedies are to be given, as the neutral salts in small doses, nitre, almond emulsion, with small doses of narcotics, Acid. Hydrocyan., Opium, Ext. Hyos., &c. But when there is general debility, diffusible stimuli are necessary, naphtha with aromatic infusions, the mineral acids, restorative ablutions of the body, &c. If convulsive symptoms appear, antispasmodics may be given internally, or injected into the rectum; but glysters should be avoided as much as possible, for fear the disturbance to the patient should increase the hæmorrhage. Generally speaking, the means employed for the cure of the hæmorrhage itself will remove the general symptoms also, and we are required to take particular notice of these only when they are especially prominent.

Transfusion. The *chirurgia infusoria et transfusoria*, which excited so much attention in the middle of the seventeenth century, has been applied in modern times to midwifery, and about fifteen years ago was first performed by Blundell, Lecturer on Midwifery at Guy's Hospital, in London; and the patient, a woman 25 years of age, was saved by it, after having experienced so severe a hæmorrhage that scarcely any sign of life remained. Not less fortunate was the experiment made about the same time and in the same manner by Waller, who attributed the success of the operation to making the injection slowly; believing rightly that if blood were injected suddenly and with force, and especially if much were injected at a time, life might easily be extinguished. Since that time, the operation of transfusion has been frequently performed in England and also in France, and in many instances with the most fortunate consequences; so that in cases where, on account of the severity and obstinacy of the hæmorrhage, life is in the greatest danger and there is no time to spare, it is evidently a means by which we may hope to save a life which must otherwise be lost.

We have employed transfusion in two cases in which the exhaustion was extreme, and can therefore recommend it from our own experience. The first was a case of passive hæmorrhage from adynamia of the uterus in the fifth period of labour; the second, an artificial delivery in placenta prævia: both patients, in consequence of the loss of blood, were brought to the brink of the grave; the first had six ounces of blood injected into a vein in the arm in three applications of the syringe, the second eight ounces in four applications, and both were restored to health.

The warm blood of recently-slain animals was once employed as a remedy for hæmorrhage. *Pliny*, *Dioscorides*, and *Paul Ægineta* mention it; *Celsus*, *Cælius Aurelianus*, *Aretæus*, and others, recommended it in epilepsy; and *Horst* attributed to it the power of dissolving stone. *Dr. Zeller* first prescribed it for hæmorrhage in 1819. The patient was 39 years old, had hæmorrhagia uteri which had been neglected so as to make her anæmic, exhausted, and like a corpse. The extremities were cold, the feet and legs swollen, and the debility was so great that frequent faintings took place. *Zeller* gave pure blood, warm from fresh-slain calves. This blood the patient drank with avidity, and she waited anxiously for the time when the next dose was to be given. Three or four ounces were given every two hours, and she asserted that every time she took it, it occasioned a comfortable warmth in the stomach and appeared to run through her whole frame. On the second day the hæmorrhage entirely ceased, and the whole body seemed to have obtained new life. After the fourth day, a cupful was given once a day until the seventh, when it was entirely omitted. She gradually recovered under improved diet, rest, and care; conceived again in five months, and gave birth to a healthy child.

We now pass on to the treatment of hæmorrhage during pregnancy with reference to the condition of that process itself. In hæmorrhages which accompany signs of abortion, in most cases we must endeavour to prevent abortion. Those which accompany mole pregnancy, always require the removal of the mole; but in each individual case it must be left to the decision of the practitioner, whether stopping the bleeding demands

the principal attention, and how the artificial removal of the mole can be accomplished without increasing the bleeding. When in such cases it is certain the bleeding cannot be stopped without clearing the uterus of its contents, we have to determine whether this operation can be performed without occasioning greater danger than the bleeding. When the uterus is not at all prepared to expel its contents, it is either impossible or dangerous to remove them artificially; and, on the other hand, if we wait too long, there may be so much debility produced by the bleeding that the temporary increase of it produced by artificial interference will be sure to destroy life. Hence a right determination, as to the time at which delivery should be undertaken, is of the greatest importance. The operation is most suited to cases in which nature has already begun the expulsion, and our object is only to hasten it.

The *accouchement forcé* is in general admissible only when the uterus, whatever the period of pregnancy may be, manifests a sufficient degree of expulsive power; in some cases however we cannot wait for this, but must interfere as soon as we perceive uterine action beginning to develope itself. The following are the rules which should guide our proceedings in these cases. (*a*) If hæmorrhage occurs to no great extent in a feeble woman, and we think abortion unavoidable, we are not to hasten it by art; for every operative proceeding necessarily occasions a temporary increase of the bleeding, and this, under such circumstances, might be hazardous to life: in such a case we may expect great benefit from the employment of ergot. (*b*) If the loss is considerable compared with the strength of the constitution; if abortion appears unavoidable; and

we have reason to fear that, from a continuance of the bleeding, a fatal degree of weakness may supervene before the natural expulsion of the ovum, the *accouchement forcé* is immediately to be resorted to; because in this case there is less danger from a momentary increase than from a continuance of the bleeding; but we must proceed with the greatest caution, and avoid the operation, if possible, in the early months of pregnancy. (c) If the hæmorrhage be slight, and a longer continuance of it seems not to be dangerous, all interference should be avoided; extraction of the fœtus then being allowable only when the uterus is dilated, and its contents have descended low down.

With respect to the advice given by some accoucheurs, that when there is no attempt on the part of the uterus to expel its contents, contraction should be excited by artificial means, such as puncturing the membranes and inducing the *accouchement provoqué*, we consider it inapplicable at any period of pregnancy previous to the child being viable; artificial abortion on account of hæmorrhage is not justifiable, and, moreover, cannot be accomplished quickly enough to be of use as a remedy for it.

(b) *Hæmorrhage from the uterus during labour.* We here distinguish those hæmorrhages which occur before, from those which appear after the birth of the child, but before the expulsion of the placenta. The phenomena of labour, the excitement of the circulation, the congestion as well as the alternate contraction of the uterus, the necessary separation of the ovum and placenta from the uterus, &c., will easily account for the frequent occurrence of hæmorrhage during labour. We have already described the ætiology of hæmor-

rhages, and therefore need only further notice that even during labour the source of the bleeding may vary. The blood may be furnished either by the vessels opened by the separation of the placenta, before and after the expulsion of the child, or by the separation of the membranes, or by the vessels situated at the mouth of the uterus; and the hæmorrhage may be active or passive, spasmodic or convulsive. We generally find that hæmorrhages occurring in the first four periods of labour, are connected with an adynamic condition of the uterus, and therefore that they quickly and seriously affect the whole nervous system, even when the loss itself is not very considerable. The exciting causes are the same as those before described; but inordinate efforts on the part of the woman, roughness of manipulation on the part of the accoucheur, and obstructions to the birth of the child, deserve particular mention; and another cause of great importance, is laceration of the uterus.

In hæmorrhage during labour, the flow generally ceases or diminishes during the pains, and returns in the intervals; the blood escapes between the neck of the uterus and the presenting part of the child; and, when this completely fills the neck of the uterus, or so occupies the vagina that no blood can escape, the external loss ceases, because the child then acts as a *tampon*. Under unfavourable circumstances an internal hæmorrhage may then take place. If the loss be considerable, the activity of the labour will be lessened, the pains will cease, the uterus will no longer contract, and the woman will soon become exhausted.

The prognosis is here not very unfavourable, at least not so much so as in hæmorrhages during pregnancy

and after labour; for, with proper treatment, the contractile power of the uterus, by which alone a diminution or cessation of the bleeding is possible, may often be readily excited.

In the treatment of hæmorrhages during labour, the same means are to be employed which have already been described, modified however according to the circumstances of the labour. When, during some period of labour, a moderate hæmorrhage occurs, we are not to be over anxious about it, but careful to avoid useless or injurious interference. We should obtain a sufficient and thorough knowledge of the cause of the bleeding and of the position of the child, place the patient in an easy horizontal posture, and forbid her making any violent efforts during the pains.

[If the hæmorrhage be of an active character, we are to employ the remedies recommended for this; but not to such an extent as to stop uterine action. A small venesection where it appears necessary, a solut. Kali carbon. with small doses of narcotics, are here sufficient, and we wait awhile for their effects to be produced; but if the loss does not cease, or increases, we then have recourse to more powerful means. If passive hæmorrhage occurs to a moderate extent, we give astringents in doses proportioned to the degree of uterine relaxation, and the extent of uterine action we wish to produce; the *secale cornutum*, ratanhia, mineral acids, &c., are the proper remedies; and should there be at the same time depression of the nervous system, we combine gentle stimulants with them in doses proportioned to the necessities of the case. If these means prove successful, the progress of the labour may be left to the powers of nature; but should the hæmorrhage not be

diminished, and symptoms arise which cause uneasiness about the state of the patient, or if, from the first, the hæmorrhage be too severe for us to trust to simple treatment, we must proceed to more active measures.

Every practitioner of experience must admit that when a hæmorrhage is considerable and increases or even continues, the only escape from danger consists in clearing the uterus of its contents; but we are not disposed to adopt this view unconditionally. By clearing the uterus of its contents we, in the first place, make it possible for the uterus to contract completely; and secondly, according to most writers, the uterus is so much excited by the operation, that contraction will follow. The latter is not, however, always the case; for although we often find that the uterus, after becoming exhausted and weakened by long and fruitless attempts to expel the child, retains its power of contraction when the opposing cause is removed, we find also that when a uterus has been emptied too quickly, as by a too rapid delivery, before having undergone the changes necessarily determined in it by the process of labour, it becomes relaxed in a peculiar manner, and remains in an uncontracted condition. Again, if a uterus be exhausted by over-much straining or other causes, or if it be brought into a similar condition by the interference required for forcible delivery, it will not always contract after having been cleared of its contents. Under such circumstances as these, the hæmorrhage will not be stopped by an *accouchement forcé*, but, on the contrary, the condition of the patient may be rendered worse by the increase of bleeding necessarily occasioned by the operation.

The following are the conditions under which we

think the *accouchement forcé* indicated. (1) When the fœtus is placed in a faulty position, so that the uterus cannot expel it; (2) when the placenta or membranes are separated from the uterus to a considerable extent, so that the contractions which the uterus is able to undergo whilst the fœtus remains within it are not sufficient for stopping the hæmorrhage, and other means have failed; (3) when the uterus possesses a moderate degree of contractile power, so that there is reason to expect that effectual contraction will take place after it has been cleared of its contents. On the other hand, we believe it to be contra-indicated in all cases in which the uterus remains quite powerless; or even in which it is so relaxed, and there exists such a degree of general exhaustion, that we can expect no contraction after the birth of the child and removal of the placenta; we may add, also, when the gush of blood is so vehement that clearing the contents of the uterus would occupy too much time, and danger is to be apprehended by even a momentary increase of the bleeding. With these principles in view, the following is the mode of proceeding in those cases in which the *accouchement forcé* is to be had recourse to on account of hæmorrhage.

(a) In unnatural presentations we must dilate the os uteri, rupture the membranes, turn by the feet, and terminate the labour artificially by extraction, if the bleeding still continues. (b) When the head presents and the hæmorrhage is severe, we first try the *tampon* and internal medicines; but if no speedy amendment takes place, we must proceed as in the former case. (c) When the head presents, and the hæmorrhage is not severe, we first try the effect of rupturing the membranes. Under favourable circumstances, the uterus

will hereby become diminished, and sufficient contraction will take place to stop the hæmorrhage. The child is not, however, to be extracted immediately if the bleeding does continue; we should wait awhile, and endeavour to stop it by the *tampon* and medicines given internally. If these do not succeed, and danger is threatened, the child is to be artificially extracted by means of the forceps. (*d*) In those cases in which the *accouchement forcé* appears impracticable from an undilated state of os uteri, we are to employ the remedies advised for hæmorrhage during pregnancy, internal as well as external, especially the *tampon*. If in this manner we are able to moderate, although we cannot stop, the hæmorrhage, the uterus may meanwhile become more developed and the os more dilated, so as to render artificial delivery practicable. When hæmorrhage is occasioned by rupture of the umbilical cord, the life of the child is in danger and can be saved only by speedy delivery; it is generally, however, impossible, sufficiently early, to detect the nature of the case.

[The distinction made by the late Mr. Crosse between accidental and unavoidable hæmorrhage, by giving the name of "*previous separation of the placenta*" to the former, and *placenta prævia* to the latter, is based upon sound practical conclusions, and indicates distinct rules of practice. It is difficult to say which may be the more dangerous form to encounter, for both will occasionally terminate fatally; but there is clearly a wide difference in the method of treating the one case and the other. In "*previous separation*" the hæmorrhage may often be controlled without artificial delivery, or even any attempt to hasten the natural process; and it is pretty well agreed by almost all writers upon the subject, that, in addition to the general rules for restraining hæmorrhage, rupturing the membranes is the safest and most effectual treatment in cases of this description. Two of the following cases are examples of the good effects of this practice; and the other exemplifies the fact that even in "*previous separation*" the loss may

be so sudden and severe as to be sufficient to extinguish life in a very short period of time.

Case 1.—Feb. 11th, 1851.—Mrs. —, æt. 41 years. A delicate woman, with several children, and now seven months gone in pregnancy. Mr. — summoned me in consequence of hæmorrhage, which had been going on all night, producing excessive depression. She had not felt the child move for several days, and had signs of commencing labour. There was not much hæmorrhage going on when I arrived; but I found the placenta near the os uteri, the membranes a little prominent during a pain, and could feel the head of the child through them; and therefore advised rupturing the membranes as a security against further hæmorrhage. In about four hours, at 2 P. M., a dead male child was born without hæmorrhage having occurred to any important extent whilst we were conducting the labour, every possible precaution having been taken to prevent it. But so great was the exhaustion resulting from the previous loss and the efforts of labour, that we could not leave her with a pulse to be depended upon until four o'clock the next morning. For several hours the pulse was so indistinct and faltering that we could not say she would live a quarter of an hour; brandy and milk were given freely, and a dose or two of ergot and laudanum. Twice she vomited, and the slightest movement threatened to annihilate the pulse, which often became imperceptible, and when felt was always very rapid. Still there was no tossing nor spectral illusion, *and the respiration was not hurried in proportion to the rapidity of the pulse*; so that I hoped all along, although at times it seemed impossible, that in the absence of further loss she would struggle through. At eleven o'clock in the morning she had regained warmth of surface, and although very pale, was altogether in a more satisfactory state. The next day she was going on favourably, and eventually recovered.

Case 2.—March 20th, 1853.—Mrs. —, æt. 45 years, with eight living children, and now seven months advanced in her eleventh pregnancy. Was at work as usual yesterday until evening, when she was seized with severe pain in the body and thought she was in labour. She soon afterwards sent for Mr. —, who arrived at 10.30 P. M., and just before he entered the room she had a profuse gush of blood, the stream reaching to her heels in bed; she became very faint, and as the hæmorrhage continued Mr. — was summoned; and he, finding the os uteri scarcely at all open, plugged the vagina. This seemed to answer, and he left the case in charge of the surgeon first called. Soon, however, she became sick and vomited, and each time she

vomited there was a gush of blood. Mr. — was sent for again early in the morning and removed the plug, but finding the os still not dilated enough to admit of any attempt to deliver, he readjusted the plug, and gave milk, brandy, and ergot. The fainting and vomiting continued, some loss taking place with every attempt to vomit, and I was then sent for. I found her very pale and bloodless, with scarcely a pulse, and had a feeling that she was dying. Brandy and milk were now given in small quantities, the sickness ceased, and as there was still some loss, the plug was removed for me to examine the state of the labour, it being certain death to let things go on as they were. The os uteri would only admit two fingers, and the head of the child (dead) presented. By dilating the uterus gently with the fingers, and opening the partially-decomposed head by pushing the finger into one of the sutures, a sufficient hold was obtained to enable Mr. — to take away the child. The placenta followed, and there was no more hæmorrhage. But during the time this occupied, the poor woman had scarcely a pulse, and exhibited every sign of sinking, in spite of the most assiduous attention in giving nourishment, stimulants, applying hot flannels to the chest, &c., and in about twenty minutes after delivery, she breathed her last. I believe nothing could have saved her; the first gush was almost enough to take away her life, and at that period to effect delivery was impossible. The best means of stopping hæmorrhage under the circumstances were adopted, but these did not succeed. Delivery was attempted and accomplished at the earliest period in which the state of the uterus made it practicable; but she had no power to rally from the fatal depression, and what was done was done too late to save her life.

Case 3.—Sept. 25th, 1854.—Mrs. —, a healthy young woman. In labour with her second child. She has had severe flooding at intervals for several weeks, which I believed to depend on previous separation of the placenta; and on rupturing the membranes the head came down, and all went on naturally. No more hæmorrhage. The child a living female.

PLACENTA PRÆVIA.

The experience I have had of placenta prævia within the last few years, has confirmed the views I expressed in my publication of the consultation practice of the late Mr. Crosse, in which I stated my belief that where the hæmorrhage was profuse enough to necessitate

the death of the child, and the placenta was found to be attached to a considerable extent over the os uteri, the plan recommended by Dr. Simpson of detaching the whole of the placenta before resorting to the artificial delivery of the child, is the proper proceeding; and that when an edge or small portion only of the placenta formed the presenting part, it would be safer, for the child, to pass the hand into the uterus and deliver, before detaching the rest of the placenta. I then, however, stated as a certainty that the plan of Dr. Simpson must be attended with destruction to the life of the child; and it is not without surprise that I can now bring forward a case which proves that although such undoubtedly will be the rule, like all other rules it is not without exception. The fact alluded to will be found in case No. 7.

I have appended to this note nine cases to which I have been called since the publication referred to; of which it will be found that three died and six recovered, and that in those who recovered, three of the children were born alive or were resuscitated after birth. The most fortunate cases were those in which the presentation was early discovered, and means were taken to effect delivery before the loss had gone on to a sufficient extent to deprive the patient of a fair amount of rallying power; and the most unfortunate were those in which too much delay preceded attempts to deliver. Such has been my strong impression on this point ever since I had any justification from experience to form an opinion, that I believe it may be said in regard to placenta prævia, as I have heard Sir B. Brodie say with regard to hernia, that the operation, if performed early, is a safe one; and that the chances of success diminish in proportion to the delay which is allowed to take place before appropriate active measures are adopted. With respect to the proper period for interference, I do not think it is necessary to wait either for labour pains or for much dilatation of the uterus, provided there is a *certainty of hæmorrhage recurring with the recurrence of uterine pain*, of which the history of the case will generally enable us to form a correct estimate; neither would *the absence of hæmorrhage at the moment* deter me from advising active steps, if I found the placenta so placed that hæmorrhage must unavoidably occur as soon as pains recommenced, and the os uteri, though not dilated, *in a dilatable condition*. I believe no harm whatever arises from gently dilating a dilatable uterus; and that if we do this before hæmorrhage has recurred often enough to place our patient in danger from loss of blood alone, our chances of releasing her from danger altogether will be increased an hundred fold. Let it be fully ascertained that the hæmorrhage for which we

are summoned depends upon *placenta prævia*, and that the os uteri, whether dilated or not, is *dilatable*; then the safe practice, both for mother and child, is to resort without delay to such an operative procedure as the particular position of the placenta, with regard to the rules above stated, would seem to indicate. If it be thought right to pass the hand through or past the placenta and turn the child, no unnecessary hesitation or delay must be allowed to take place before completing delivery; as hæmorrhage might go on as long as the placenta was partially attached, and the life of the child would be placed in greater jeopardy every minute. But in cases where it is thought right to adopt the plan recommended by Dr. Simpson, (where the life of the child must always be a matter of greater uncertainty) and the condition of the mother from excessive loss makes further immediate proceedings hazardous to herself, there is less objection, provided the hæmorrhage ceases (as it is almost sure to do after the entire separation of the placenta) to wait awhile to give an opportunity of rallying the patient by nourishment; or even, if there be a natural presentation, to leave the rest to the efforts of nature. I have not in any case seen a recurrence of hæmorrhage, after the complete detachment of the placenta, of any amount to compromise the life of the patient; and in one of the following cases (No. 4) too much anxiety to deliver after hæmorrhage had ceased, appeared to lead to difficulties of another kind which might not else have occurred.

There is another matter also, too much overlooked in cases of this description, which it is essential for the practitioner to pay attention to. I allude to the means adopted for relieving the patient from the effects of loss of blood; the fault is that too much anxiety is felt to remove the faintness by stimulants, and too little attention paid to supplying the patient with the means of forming blood to compensate for that which has been lost. It is most true that stimulants are required to rouse the nervous energies of the patient; and not less so that nourishment is demanded as a means of furnishing a fresh supply of vital fluid. In the weakened state in which all the organs are reduced by severe losses of blood, judgment is required as to the best food to administer; and I believe the union of milk with brandy or rum will answer both indications as well, if not better, than anything else. In these, as well as in other cases of extreme debility, I have frequently known the strongest beef tea prescribed—*essence of meat*, as it has been called—and the effect has been that it has been rejected by the stomach; and no wonder, when the very same thing would have been felt oppressive to the stomach even of a healthy individual.

It is like giving strong meat to babes, and fails in nine instances out of ten to afford the nourishment required to persons who are so reduced as to be able to digest such things only as are the most easy of digestion.

Case 1.—May 19th, 1850. Mrs. —, æt. 35 years. Has had seven children and two abortions. Now in labour at nearly the full period; had flooding two months ago, which has recurred at intervals since. Had labour pains last night accompanied with considerable flooding, which returned again this morning, in consequence of which her surgeon requested my attendance. I found an edge of placenta near the os uteri, and could just feel the head anteriorly; uterus dilatable, though not dilated. Owing to the great loss which had occurred, and the weak state of the patient, I urged immediate turning, without waiting for labour pains or another gush, although she was now perfectly free from either pain or loss; the next gush might be serious, perhaps fatal,—her pulse was good enough to bear the operation, and Mr. — performed it very carefully and without violence. In the delivery he had difficulty with the right arm and gave it over to me, and in getting it down I felt the humerus snap; the head was also delayed, and the child (a male) stillborn. The fracture was therefore of no consequence, except as a warning always to endeavour to avoid such an occurrence. I was using but little force at the time. No blood was lost during the turning nor afterwards, and the patient soon recovered.

Case 2.—August 31st, 1850. Mrs. —, a poor woman who had had, I believe, eleven children before; now not gone quite her full time. Mr. — sent for me at one o'clock this morning in consequence of severe hæmorrhage from placenta prævia. I advised him to turn immediately, as the patient was very faint and could afford no more loss; this he did with considerable dexterity, and delivered her of a dead child. The hæmorrhage ceased, and the woman did well.

Case 3.—July 22nd, 1851. Mrs. —, a poor woman, at nearly the full period of her ninth pregnancy, very poor and feeble. She had been flooding at intervals for a month, and sometimes severely, but no particular notice was taken of it. At one this afternoon a midwife was summoned, after considerable flooding and some pain. Some large clots passed after her arrival, but then, as all seemed quiet, she did not send for assistance until about seven o'clock, when Mr. — found her with placenta prævia, and seriously faint. He sent for me

at eight, and I was soon on the spot. She was then very faint and exhausted, indeed in a very alarming state. The placenta was considerably detached and protruded into the vagina, the head presenting behind it. No uterine pain, and but little flooding, although enough in her weak state to be of consequence. There was neither milk nor broth in the house; we gave her some brandy, and at Mr. —'s request I turned, and delivered her of a dead male child, there being not the slightest resistance to the birth; the operation in fact was much too easy; her pulse was failing, and she expired in about a quarter of an hour. No hæmorrhage took place during or after delivery; but we had no nutriment at hand to give, and brandy was of no avail in restoring her.

✓ *Case 4.*—August 15th, 1851. Mrs. —, a poor delicate woman with several children, and now six months gone in pregnancy. The waters escaped two or three days ago, and flooding has taken place at intervals. To-day it has been very severe. In the absence of Mr. —, Mr. — attended, and finding her very much depressed, he plugged the vagina, gave some brandy, and requested my assistance. I found her, at about 7 P.M., very faint, pulse scarcely perceptible, surface very pallid; a considerable quantity of blood had been lost. We gave some milk and brandy, which she took readily; and before anything more was done, Mr. — came. She had uterine pain now and then, and with each pain some blood was lost in spite of the plug, more indeed than was safe in her exhausted and pallid condition; so, as Mr. — told me he had found the os uteri dilated to the size of half a crown, I advised the removal of the plug, and delivery if practicable. At the request of both my friends, I proceeded to do what might be required: the uterus would admit but two fingers, and did not seem disposed to dilate (ergot had been twice given). The vagina was filled with clotted blood; more blood was flowing—further loss was dangerous; the placenta was situated directly over the os uteri, but it was impossible to introduce the hand to turn; so I at once adopted what I considered the only means of stopping the hæmorrhage and saving life, and detached the whole of the placenta from the uterus with my fingers, after which no hæmorrhage took place. Before withdrawing my hand I managed to get hold of a limb between my fore and middle fingers and brought it down, and with it I brought away the placenta with the cord attached. But it proved to be an arm, and I then introduced my hand again into the vagina, and endeavoured gradually to dilate the uterus; and as there was no hæmorrhage there was no necessity for haste in doing this. After

some time, however, I could get only four fingers into the uterus; and as I could get them round the child's neck I pulled down the head, but could not bring it through the still imperfectly dilated os uteri. I then put one of my fingers into the mouth, and another into the orbit, by which means I pressed the head against the os and kept it there, as the best way of further dilating the os; but I felt sure also that I could apply my vectis behind the head and soon complete the delivery, and therefore sent for the instrument. Meanwhile, I was glad to give my hand rest, and Mr. — expressed a wish to examine how matters were going on. Having introduced his left hand into the vagina, he thought the os now dilated sufficiently to allow his hand to pass, and persevered until he was able to seize a foot and deliver by turning, which, however, proved a very painful proceeding. Between the delivery of the placenta and the birth of the fœtus, we had been able to get down a good quantity of milk and brandy, and as there had been no more hæmorrhage, the pulse was, in a measure, restored. The uterus contracted well after the child was removed, and we hoped for recovery. On the following day (16th) she had a good deal of after-pain, but no fixed inflammatory pain in the body, and was very pallid and faint. On the 17th there was more pain, with a rapid pulse and anxious countenance; turpentine was applied externally, and she had a dose of turpentine and castor oil.

I called again on the 20th. The bowels had acted after the castor oil and turpentine, and she had taken 3j Sp. Terebinth. several times since. She was now, and had been since yesterday, quite free from pain. She spoke cheerfully and was sitting up in bed, which I cautioned her against, fearing she might be attacked with syncope. Milk and meat broth taken freely.

21st.—Had a rigor early this morning, followed by profuse perspiration and great dyspnœa. The bowels had acted twice, and the exertion had probably overpowered the heart. Pulse very rapid. Gave some wine; no nourishment had been given during the night, and she had been very badly attended to; to take arrow-root and wine. During the next few days she had rigors and perspirations, but no very evident signs of uterine disturbance. She took nourishment pretty freely, and had bark and æther; but her faintness and exhaustion continued, and she died on the 27th, after having had convulsions several times during the day. My impression is that she lost her life more from the effects of the great loss of blood she had sustained, than from any direct affection of the uterus; for there were no evident indications of mischief here, and her constitution was of so feeble and unhealthy a character as to make it highly pro-

bable that it would not bear up against the depressing influence of so large a loss of the vital fluid. I cannot but remark, however, that the pain she suffered during delivery was likely still further to depress her, and that, instead of resorting to the operation of turning, or proceeding with it when found to be so painful, it would have been better to have waited for some effort of nature to assist in the expulsion of the child after it had been placed in a position in which it would readily have passed when the os uteri had become more dilated.

✓ *Case 5.*—January 22nd, 1852. Mrs. —, æt. 30, near her full term of pregnancy with her fifth child. A fortnight ago she was subjected to mental anxiety, which was followed by slight pain in the back and a considerable loss; twice again during the fortnight she has had flooding, and to-day it recurred to such an extent that Mr. — called me to his assistance. The os uteri was soft and partially dilated, the head presenting, and the child moving freely in a large quantity of liq. amnii. No decided labour pains. I thought I could distinguish an edge of placenta near the os internum, but was not sure of it, and Mr. — could not feel it. We therefore determined to rupture the membranes, which I did, and a large quantity of clear liq. amnii escaped. Directly after this another gush of blood took place, and I could then distinctly feel half an inch or more of placenta where I thought I could feel it before, and advised Mr. — immediately to turn, from a conviction that further loss would put her life in jeopardy. This he quickly performed, after some wine and milk had been given; and a fine female infant was born, which, after nearly an hour's care and attention, was made to breathe freely and to cry. No more flooding occurred, but the mother remained very faint for several hours. Milk, brandy, and two doses of fifty drops each of laudanum were given, and at 3 P.M. the next day, the pulse was restored and she appeared safe. Mother and child did well.

✓ *Case 6.*—November 1st, 1852. Mrs. —, æt. 25 years, a strong muscular woman, with several children, and now seven months advanced in pregnancy. She had a loss a month ago, and several times since. This morning it came on much more severely, and was accompanied with some pain. Mr. — thought it might be a placenta presentation, and called me at 7 P.M. I found the os in process of dilatation, with a bag of membranes projecting, through which I could not feel any part of the child; but I could feel the head through the anterior wall of the uterus. Presently, during a pain, the membranes broke, a considerable gush of blood followed, and I found a large

portion of placenta protruding through the os, and the head of the child pressing upon the rest. The pelvis being roomy and the head small, this was soon born, the rest of the child and the placenta following almost immediately. Had not the head come down so quickly, the placenta would have been born first. The uterus contracted well, there was no more hæmorrhage, and the patient had a rapid recovery.

Case 7.—June 5th, 1853. Summoned at midnight to Mrs. —, æt. 27, a delicate lady, with three children, and nearly seven months advanced in pregnancy with a fourth. She had been quite well during this pregnancy, but after walking a good deal the day before, a slight loss appeared at 4 p. m., and became more profuse after she had retired to bed at 10.30. Two or three clots of some size had passed, and there was free trickling of blood, but neither uterine pain nor sickness. She was not faint; pulse good; had had a rigor, but was now warm. I could feel no presentation; child moving actively in the uterus; os uteri loose and cushiony. As the hæmorrhage was not severe, *and there was no pain*, I hoped miscarriage might be prevented, and that the loss depended upon some slight separation of the chorion. A piece of sponge, saturated with vinegar and water, was passed up to the os uteri, napkins dipped in cold water were applied to the vulva, and a dose of ergot and laudanum was given internally.

6th.—9 A. M. Slept at intervals during the night; scarcely any oozing; no pain; no illness. To take coffee and milk cold. Cold napkins continued. Urine passed without inconvenience.

7 p. m.—No hæmorrhage; sponge withdrawn, cleaned, and replaced. Vulva to be frequently sponged with cold water; and wet napkins, which were sometimes cold and sometimes hot, discontinued.

7th.—Sponge removed this morning scarcely soiled, and not re-introduced; an enema of cold water.

8th.—Bowels well relieved; no hæmorrhage.

14th.—Nothing of importance occurred until this evening, when a slight hæmorrhage appeared, and the sponge was introduced again. No pain; no uterine contraction. To have an opiate, and gr. v. Acid. Gallic. every four hours.

15th.—No return of bleeding.

16th.—Slight hæmorrhage this evening, and sponge reapplied.

17th.—At 4 A. M. hæmorrhage came on suddenly and severely, and was going on rapidly with apparently slight uterine pain when I arrived. The loss was so great that no time was to be lost; I introduced my hand into the vagina, and found the placenta directly over

the os uteri. This I immediately detached all round, according to the plan recommended by Simpson, and the hæmorrhage thereupon ceased. I then considered whether I should wait and allow nature to expel the child, as the head was the presenting part; but finding the os uteri easily dilatable, and as the great loss she had sustained made it undesirable, not to say dangerous, to subject her to any unnecessary exertion, I passed my hand onwards into the uterus, turned, and delivered in a few minutes. The placenta, already detached, was expelled by uterine contraction, and the danger for a time was at an end. The child breathed, and soon began to cry; it was a male of quite seven months, small, but perfect, and not unlikely to live. I was surprised to find that the child could be born alive when the placenta had been first detached, and delivery not proceeded with for some minutes afterwards. The uterus contracted firmly, a bandage was applied, and an opiate given. For some time there were restlessness, sickness, hesitating pulse, tossing, and yawning; but having taken some milk and brandy, she afterwards became quiet and composed, and the pulse rallied satisfactorily.

27th.—All has gone on favourably up to this period. She got into the drawing-room yesterday, and the baby appeared to be going on well until yesterday, when a convulsion occurred and it died at noon to-day. The mother eventually recovered.

Case 8.—October 16th, 1854. Mrs. —, 36 years old. Summoned at 2 A. M. on account of hæmorrhage which had come on suddenly the evening before, and since at intervals to some considerable extent. She had been married ten years without being pregnant, and was now a little more than six months gone. Hæmorrhage had occurred twice before during the month. The placenta presented at the os uteri, the chief part of it lying behind the posterior lip; and Mr. — had attempted to turn, but could not introduce his hand. On endeavouring to do this myself I found it quite impracticable, owing to the narrowness of the vagina and pubic arch; and therefore carefully plugged the vagina, and advised Mr. —, in case of a return of hæmorrhage, to send for another medical friend whom I knew to have a very small hand, and one accustomed to such operations. No hæmorrhage occurred, but at 7.30 (I left at 4) Mr. — thought it necessary to have the plug removed to enable the patient to pass water, and sent for the gentleman I had named; who, not without considerable difficulty, did pass his hand and detach the placenta from the uterus without removing it, leaving the rest to nature. After several hours

had elapsed without further hæmorrhage, labour pains became active, and delivery was accomplished without resorting to further artificial interference. The expulsion of the child was difficult and painful, but the patient soon recovered.

Case 9.—June 16th, 1855. Mrs. —, æt. 40 years, in labour with her first child. Her surgeon had been first summoned on the 13th on account of hæmorrhage, for the relief of which he introduced a sponge into the vagina. Hæmorrhage recurred on the 14th and another surgeon visited her, who recommended the same means of restraining it, as the os uteri was scarcely at all open and the presentation doubtful. The loss continued at intervals, and, on the evening of the 15th, the husband came to request my attendance; but as I was out of town, he said he must find up some one else, and left no message as to the nature of the case, or the residence of the patient, and I heard no more about it until the evening of the next day (16th), when Mr. — came for me in breathless haste, and I was soon at his house. I found Mr. — in attendance, and soon another surgeon arrived. The case was one of placenta prævia; the hæmorrhage had been severe at intervals, and had been going on all the morning to a greater extent than before. The patient was very pale, with a death-like aspect; but her pulse was distinct, and she was able to take brandy and milk. The os uteri was dilatable, and the placenta a good deal separated; and there was, just at the time, neither pain nor hæmorrhage: but I felt so sure of a return of it on the recurrence of uterine action, and that a very little additional loss would deprive her of life, that we agreed at once to separate the rest of the placenta, and then proceed to deliver by turning, or wait, according to circumstances. After giving more nourishment, Mr. — introduced his hand, the os uteri offering but little obstruction, although the vagina did; and feeling the child's feet as soon as he had separated the rest of the placenta, he ruptured the membranes and endeavoured to deliver by turning. But the pulse ceased under the effort; she had already lost too much blood; and although none escaped during the operation, she ceased to breathe before delivery could be completed. It was too late to save her; the child also was dead.]

Uterine hæmorrhage in the fifth period of labour. It is a melancholy fact, that hæmorrhages occur most frequently in the fifth period of labour, when the patient

appears released from all anxiety. In the Midwifery Klinik at Berlin, hæmorrhage occurred only 18 times in the first four periods of labour, whilst it happened 124 times in the fifth. The general symptoms of this kind of hæmorrhage are the same as those already described, but we have to expect the occurrence of dangerous symptoms so much the earlier, the greater the exhaustion consequent upon the efforts of labour; in which case we shall be called upon to interfere the sooner, because if we allow the proper period to pass by, our subsequent attentions will prove fruitless.

The following are the different ways in which hæmorrhage may occur in the fifth period of labour.

1. The placenta is not separated, the uterus is relaxed, and the blood escapes from the free vessels of this organ: in these instances the loss is usually but moderate.

2. The placenta is partially separated, and the uterus moderately contracted.

3. The placenta is partially separated, and the uterus possesses but little or no tonic power.

4. The placenta is partially separated, the rest abnormally adherent, and the uterus contracts but feebly.

5. The circumstances being the same as those just described, the uterus acts with full power.

6. The placenta is completely separated, and the uterus remains in a condition of exhaustion or *adynamia*.

7. The placenta being either partially or completely separated, there is spasmodic contraction of the uterus, which, by hourglass contraction, or closure of the os uteri, retains the placenta (*Placenta incarcerata*.)

8. The placenta being either partially or completely loosened, part of it is forced out of the uterus, and the

rest retained by the os uteri contracting upon and embracing it.

9. The placenta is only partially removed, and there are portions of it still left behind in the uterus.

With such a variety of circumstances, it is natural that the treatment also should vary; for the remedies which have to be employed for relaxation will be inappropriate when the uterus is in a spasmodic condition. The rules which have been already laid down for the general treatment of the hæmorrhage according to its character, are applicable here also, and the question we have now to discuss is whether, and under what circumstances, the artificial removal of the after-birth is to be advised. When the placenta is partially separated, and there is moderate contraction of the uterus, the removal of the placenta will prevent any further hindrance to the contraction of the uterus, and thus effect a cure of the hæmorrhage. With a relaxed state of the uterus the artificial removal of the placenta will prove useful; because the operation itself, by stimulating the internal surface of the uterus, excites contraction sufficient to stop the hæmorrhage, although the uterus might not have had the power to separate and expel the placenta. In spasmodic conditions of the uterus, the artificial removal of the placenta, except in a few cases, will be desirable, because the irregular contraction of the uterus dependent upon partial adhesion of the placenta will thus be overcome. Lastly, after the placenta has been removed, we can employ more effectually the remedies, internal and external, required for the cure of hæmorrhage. In opposition to these advantages, however, we have to remark that the operation itself must not be considered a trifling one, but is painful, exciting,

and capable of causing direct injury. In very sensitive patients, spasm, or even convulsions, may ensue and render the operation impossible; the hæmorrhage will increase during its performance; the patient may fall into the greatest exhaustion, or even syncope, during or after the operation; the uterus may remain completely relaxed from the stimulus of the operation being more than it could bear; the genital organs may suffer injury, or the placenta be torn, and part of it left behind attached to the uterus. These and other injurious consequences happen indeed but seldom, and then from some unfortunate circumstance or from a rough performance of the operation; but the possibility of their occurrence should lead us always to avoid the artificial removal of the placenta, when not urgently required on account of the hæmorrhage.

When a moderate degree of hæmorrhage takes place after the expulsion of the fœtus, the placenta being still either wholly or to a considerable extent adherent, the uterus somewhat contracted, and no other unfavourable symptoms present, we should be satisfied to place the patient in an easy horizontal posture, employ cold, administer internally ergot, the mineral acids and other astringents, and gently irritate the os uteri with the finger from time to time; and if we find the placenta to be by these means separated and forced down within reach of the finger introduced into the vagina, we may remove it by gentle traction of the cord. In a very few instances the hæmorrhage may depend upon congestion of the uterus, in which case a small venesection will be proper; but this is always to be avoided if possible.

If we find the uterus relaxed and the placenta completely or extensively attached, the hæmorrhage at the

same time not being very considerable, we must endeavour to excite contraction by strong friction and compression of the abdomen, aided by the administration of ergot in large and more frequently repeated doses; or even by the cold *douche* and injections into the vagina or umbilical vein. If, after the continued use of these means, we find no abatement of the hæmorrhage, or if it becomes more severe, the hand must be introduced and the placenta taken away. If the placenta is separated to a great extent, leaving but a small portion still adherent, and the hæmorrhage is but slight, we try the means above advised for a short time; but if they do not soon answer, we should remove the placenta artificially, whether the uterus be moderately contracted or relaxed, unless a state of complete syncope be present. We can ascertain the existence of extensive detachment of the placenta by the loosened portion of it lying close to or having passed through the os uteri, and the insertion of the cord being easily reached. Abnormal adhesion of the placenta can be ascertained only by the introduction of the hand into the uterus; but this is allowable where existing circumstances, especially the hæmorrhage itself, make it desirable to detach it, and then it will not be proper to withdraw the hand without having separated the placenta. If the placenta is detached completely, but the uterus is too relaxed to be able to expel it, it should be immediately removed artificially; but we must not in this case fall into the error of considering the removal of the placenta to be the cure of the hæmorrhage, but rather employ with assiduity ergot and the other internal and external remedies for exciting contraction. When, under any condition of the placenta, the uterus

is found to be in a spasmodic state, the removal of the placenta is inadmissible so long as the spasm lasts, and we must first direct our attention to the removal of the spasm and restraining as much as possible the loss of blood. If, when the spasmodic action has been overcome, artificial removal of the placenta appears necessary, it should be done quickly, for fear of a return of spasm.

With due regard to the circumstances above described, therefore, recourse should be had to the artificial removal of the placenta only when the hæmorrhage cannot be stopped by other means, when symptoms indicative of danger supervene, and when there is nothing to contra-indicate the propriety of the operation. The circumstances which contra-indicate the operation are, the hæmorrhage being so severe as to make it necessary to save every drop of blood; the patient being too weak or too excited; and lastly, spasmodic contraction of the uterus: under these conditions we must confine ourselves to remedies which will restrain the bleeding, and not proceed to take away the placenta artificially until they are removed. The delay of the operation has been censured on the ground that, if necessary at a later period, it will be more difficult to perform, from the uterus probably being contracted; but this objection is not tenable; when there is no abnormal adhesion, the separation will take place naturally; and when there is, the subsequent separation of the placenta will be easier the more the uterus itself is contracted; moreover, with a delay of a few hours the os uteri does not contract to such a degree as to make its dilatation for this purpose more painful and dangerous, so that we gain rather than lose by waiting a reasonable time.

RETAINED PLACENTA.

[Case 1.—March 24th, 1851.—Mrs. —, æt. 26 years. A healthy young woman in her third pregnancy. Aborted last Thursday or Friday, at seven months according to her own account, but from the size of the fœtus I should say not more than five. The nurse, an “experienced” midwife, said the fœtus came away “quite clean,” and the after-birth shortly afterwards, but *in pieces*. She was quite positive the placenta had come away, for she “saw the rough place where the cord always hangs,” she did not however see the cord, and said she was so hurried at the time that she could not examine it particularly. At three o’clock this morning (Monday) a surgeon was sent for on account of alarming hæmorrhage; and in consequence of the midwife’s statement that everything had come away several days before, he gave ergot and applied cold vinegar and water. She had lost a great deal and was very faint, but soon got better. At about noon, Mr. — was sent for again on account of fresh hæmorrhage, and found her exceedingly faint, so as to excite alarm as to her safety. After he had rallied her somewhat, and subdued the hæmorrhage by the same means as before, he made a vaginal examination, and felt a substance which he could move from side to side, and which appeared to him to be either a polypus, an inverted uterus, or the placenta. The midwife, however, repeated her firm persuasion that the after-birth had passed away, and Mr. — felt doubtful about the case; the substance appeared to adhere firmly to the os uteri, and being uncertain as to its nature he did not like to pull it away. In the evening I accompanied Mr. — to see the case; she had been much better, was no longer very faint, and had had but little loss since the last visit. I detected a putrid smell, and from the history, (especially from the nurse’s description of *how* the placenta came away) I strongly suspected the tumor to be placenta. On examination, I found this to be the case; it was partly in the vagina and partly in the uterus, with the os uteri firmly contracted around it. I withdrew it with the hand; it was firm and whole, but very offensive. The patient soon got well, without any recurrence of hæmorrhage.

Case 2.—September 10th, 1851. Mrs. —, a strong healthy lady, living in the country, the mother of several children, miscarried early this morning. The fœtus was about three months, and hæmorrhage to a considerable extent had been going on all day, with severe abdominal pain and forcing. In the evening, Mr. — summoned

me in consequence of severe flooding; numerous clots had passed, but no one had seen the placenta, and I suspected its retention to be the cause of the hæmorrhage. On examination, I found this to be the case; a small portion of placenta projected through the os, and with the expulsive pains caused by my manipulations a large firm placenta was soon sufficiently protruded to enable me to take it away. Hæmorrhage ceased after this, and she soon recovered.

Case 3.—February 27th, 1852. Mrs. —, æt. 30 years. Premature labour at less than five months, accompanied with severe hæmorrhage, which was restrained by a plug; the placenta had not come away, and four hours after the fœtus was born, Mr. — consulted me as to the propriety of removing it. I found the placenta partially protruding through the os uteri, and thought it advisable to remove it artificially; but it was firmly embraced by an hourglass contraction, and a portion of it adhered intimately to the fundus uteri, so that we could not remove it entire. The greater part, however, was taken away, and a sponge dipped in vinegar introduced into the vagina. She had an opiate, and took a little brandy and milk as nourishment occasionally; we left her tolerably easy, without hæmorrhage, but faint and depressed.

For a few days this patient had fetid discharge, tympanitic body, rapid pulse, great depression, indeed serious symptoms of purulent absorption; but by the free use of turpentine internally in 5j doses, and externally in the form of stupes, with an opiate occasionally, she weathered the storm, and had a good recovery.

Case 4.—August 27th, 1852. Mrs. —, æt. 47 years. Mother of several children, now about three months advanced in pregnancy, and attacked with severe hæmorrhage. So much loss was going on that Mr. — requested my assistance. It was doubtful whether an ovum had passed, but I found a portion of chorion projecting through the os uteri and removed it: the os uteri was not large enough to admit the finger. A sponge dipped in vinegar and water was now applied close up to the os, and some milk and a little brandy given to restore her from her faintness.

28th. Had a good night, and was somewhat rallied, although the pulse was still very weak. Sponge removed, cleaned, and reapplied. No hæmorrhage; no more ovum expelled.

September 11th. Two or three small pieces of membrane have

been expelled since last report; the sponge was continued for a day or two, and there was no more hæmorrhage. From this time all went on well, and she soon recovered.

Case 5.—December 20th, 1853. Mrs. —, æt. 22. First child; long and tedious labour. The child had been born an hour and half before I arrived, and several attempts had been made to remove the placenta, but without success. I found an hourglass contraction, with the placenta entirely adherent and occupying the whole cavity formed for it by the fundus. With some difficulty I removed it whole, and left her an hour afterwards in a satisfactory state. She soon recovered.]

(c) *Uterine hæmorrhage after labour.* Hæmorrhage may take place at any time during the puerperal state, but it is more frequent either immediately after labour or within the first week. The causes of hæmorrhage at this period are the same as those which have already been described, with the addition very frequently of an irregular labour. A labour too rapid or too slow; the too speedy removal of the placenta, stimulants and a heating diet, large doses of narcotics during labour, over-exertion during the pains, placenta presentation, injury to the neck of the uterus, operate as special causes of hæmorrhage; and this may be active, passive, or dependent on spasmodic action. But it must also be borne in mind that here also hæmorrhage may arise from organic causes, viz, when a portion of the placenta or membranes remains in the womb, or when the structure of the uterus is diseased. As regards retention of a portion of the placenta or decidua, these cases are not of rare occurrence, and we have frequently met with hæmorrhage, even late in the puerperal state, where pieces of these parts have been expelled. The symptoms of hæmorrhage after labour vary according to the severity of the loss and the constitution of the

patient: sometimes it is so slight as to occasion no other trouble than a slow recovery; but if it be severe, and the patient herself weak and much exhausted from her labour, the countenance quickly assumes a fallen pallid appearance, the extremities become cold, the pulse small and scarcely perceptible, the patient complains of noise in the ears, dulness of sight, giddiness, anxiety, shortness of breath and oppression at the chest, pain in the præcordia; then follow vomiting, syncope, convulsions, and death.

The prognosis of hæmorrhage after labour is always more unfavourable than when it takes place at any other time; if the loss be considerable, sudden, and rapid, dangerous symptoms quickly arise; and unless the woman possess a good constitution, considerable weakness remains for a long time after the bleeding is stopped. In slow and chronic hæmorrhages, the restorative process in the uterus is impeded, vital power gradually diminishes, and evil consequences may probably be anticipated. In the treatment of hæmorrhage after labour, the means before described must be employed according to the indication to be fulfilled, and we here meet with no embarrassment with reference to the fœtus. Venesection will scarcely ever be necessary: when our object is to excite contraction of the uterus, we must go no further than is necessary to stop the bleeding, for fear of stopping the lochia also. Judgment must also be exercised in the use of narcotics; and if we desire to employ cold, we must be careful not to wet the patient too much, and keep the bed as dry as possible, it being important in the puerperal state to avoid interruption to the functions of the skin. If the *tampon* has been required, it must

not be allowed to remain too long, since, by impeding the lochial discharge, it may occasion both local and general disturbance. But other methods have been employed for stopping hæmorrhage at this period, which we shall now proceed to examine.

1. *Compression of the abdomen, and of the womb in particular.* This has been much recommended and employed from the earliest times—by *Paré, Dassé, Puzos, Levret*; in later times both English and French writers have expressed themselves in favour of compression, not only as a means of stopping hæmorrhage when it exists, but also of preventing it. *Gaitskell*, who employed it for forty years, is said not to have met with one fatal case of hæmorrhage in 7000 labours. *McKeever* states that, in the Dublin Infirmary, during the years 1819-20, in 6685 labours, only twenty-five cases of hæmorrhage occurred, all of which terminated favourably. *Leroux, Denman, Baudelocque, Daventer, De la Tourette, Millot, Cluet, Saxtorph, Gooch, Collins, Blundell, Velpeau*, and many others, also speak very favourably of compressing the abdomen. They have not all, however, employed it in the same manner, or with the same intentions. Some advise pressure over the uterus with the naked hand, others apply compresses dipped in vinegar, and *Miles* invented a belt of leather fastened round the hips with straps and buckles, fitted with a pad and screw, by which the pressure over the uterus could be increased or diminished at pleasure. In our opinion, none of these contrivances are more simple and effectual than the application of a pad or compress, consisting of a napkin several times folded, over the uterus, secured by the common body-band; and even this will be of little service until the uterus

has been made to contract by pressure with the hand, friction, or some other effectual remedy, and our object is to prevent it from becoming again relaxed.

[This is an important observation, and puts a just estimate upon the value of compression of the abdomen after labour. I have frequently been called to cases of post-partum hæmorrhages where I have found the body-band most properly adjusted, but the hæmorrhage continuing, and the uterus imperfectly or not at all contracted; and then it has appeared to me that the bandage acts as an embarrassment and hindrance to uterine contraction by the unequal pressure it exerts upon the dilated walls. I have, under such circumstances, always removed the bandage, and sought to produce contraction by external manipulation; and have never felt satisfied to have the bandage reapplied until, by some means or other, firm contraction of the uterus has been secured. When contraction has taken place, I have great faith in the power of a well-adjusted body-band to maintain the uterus in that condition; but it should be considered *as a means of preventing relaxation, not of producing contraction*, and ought not in any case, as far as I am capable of judging, to be firmly applied until a due amount of contraction of the uterus has been obtained and is found disposed to continue.]

If the hæmorrhage does not depend upon relaxation, but upon congestion or a spasmodic condition of the womb, compression can do no good, and ought to be avoided so long as there is any reason to fear a return of the hæmorrhage.

2. *Compression of the aorta.* *Plouquet* advised pressure with the hand on the *aorta descendens* through the posterior wall of the uterus. *Ulsamer*, in the year 1825, proposed making pressure on the aorta from without, through the parietes of the abdomen. *Siebold* used pressure from without, upon the *aorta descendens* near the point of its division, with considerable benefit. But, notwithstanding the praise bestowed upon these proceedings, we cannot refrain from expressing our opinion

that they have been incorrectly estimated. The introduction of the hand into the uterus and stimulating its internal surface is one of the most powerful means of inducing contraction; and although by indiscreet manipulations it might be attended with injurious consequences, we believe it to be superior to all others. But, whilst the accoucheur thinks he is compressing the aorta, he is, in fact, only stimulating the internal surface of the uterus: an effectual compression of the aorta cannot be made without the application of a degree of force which might easily be injurious to the patient; and even when it is compressed, it can never be completely closed so as to give us reason to expect a diminution of the bleeding directly by this means. In all hæmorrhages of an active character, the plan would be in the highest degree objectionable; and we have no confidence in it, except occasionally as an auxiliary to other internal and external remedies.

3. *The introduction of the hand into the uterus* in order to produce contraction by stimulating its internal surface, is far more effectual for stopping hæmorrhage after labour than compression of the aorta. *Burns* lays great stress upon this proceeding, and it is advised also by *Dewees* and *Hamilton*. We believe it to be the surest way to excite contraction of the uterus, and that it ought to be employed in all cases of severe hæmorrhage where contraction is the object to be obtained, unless it be in other respects contra-indicated. Besides exciting contraction, this method has the advantage of making us thoroughly acquainted with the condition of the uterus, and enabling us at the same time to remove the coagula collected within it. But, on the other hand, it is an operation always attended with more or less

pain, and should not be resorted to (except under great urgency) when it gives rise to much pain and spasm, or when some time has elapsed since the labour, so that the os uteri is partially closed.

[This corresponds with my own experience as to the efficacy of introducing the hand and removing whatever may be found in the uterus, in putting a stop to post-partum hæmorrhage, especially where the uterus is irregularly contracted or keeps contracting and dilating alternately. Under these latter circumstances I have seen all other means fail; and always, I think I may say, have found the introduction of the hand and removal of the contents of the uterus successful. The following cases are examples of this practice, and, if done carefully and without unnecessary violence, I believe it to be as safe as it is effectual.

Case 1.—March 22nd, 1850.—Summoned by an experienced accoucheur to Mrs. —, who was suffering from hæmorrhage occasioned by previous separation of the placenta. I advised rupturing the membranes, and this stopped the loss. The head presented and the labour went on naturally; but after the removal of the placenta, severe hæmorrhage came on again, for which pressure on the uterus, cold applications, and two doses of ergot and laudanum were used without effect. The hæmorrhage ceased on introducing the hand into the uterus and thus causing it to contract equally and regularly. She recovered without a bad symptom.

Case 2.—September 29th, 1851. Mrs. —, confined this morning with her second child. I was called by Mr. — about three hours after labour, in consequence of hæmorrhage. She was pale and faint; hæmorrhage still going on, not severely but dribbling. Uterus contracting and dilating by turns, but its contraction was irregular, lobular, not globular. I suspected the presence of coagula keeping up the bleeding, and recommended the introduction of the hand for their removal, the usual remedies having been tried without success. Mr. — removed a large quantity of coagulated blood from the uterus and vagina: proper contraction ensued and was maintained by cold and pressure, and no further hæmorrhage took place.

Case 3.—October 16th, 1851. Mrs. —, confined on the 11th instant at full period; labour natural and easy; delivery of placenta

followed by a sudden gush. More or less hæmorrhage each day since, and increased last night, which, together with an attack of diarrhœa, has produced considerable faintness and the usual effects of loss of blood. Countenance pale and anxious, pulse feeble; clots of a dark colour every now and then passing. As hæmorrhage was still going on, I advised Mr. — to introduce his hand into the uterus, under the impression that it contained something which kept up the loss. He removed a large quantity of coagula from the vagina, and also a small portion of placenta from the uterus, which no doubt had given rise to the dangerous bleeding. She was well supported with milk and wine, and no more hæmorrhage occurred. The patient soon recovered.

Case 4.—December 1st, 1852. Mrs. —, æt. 40 years, a healthy woman, with a large family, was attacked with very severe hæmorrhage immediately on the termination of her last labour, and after some hours Messrs. — called me to their assistance. There was but little loss going on when I arrived, but sufficient oozing to keep up extreme faintness, owing to apparently irregular contraction of the uterus. I advised the introduction of the hand to remove coagula, after which all hæmorrhage ceased, and the uterus contracted into smaller dimensions. We gave brandy and milk freely, and three 3ss doses of laudanum, applying at the same time warm blankets to the body, and bottles of hot water to the limbs. After a time the pulse beat distinctly, and the patient had a slow but complete recovery.

Case 5.—March 26th, 1853. Mrs. —, æt. 22 years. Confined this morning with her first child; labour natural, but followed by a profuse gush and then a continued trickling of blood, producing an extreme degree of faintness. Mr. — had once introduced his hand into the uterus, and found the fundus contracting and relaxing, the rest of the organ being perfectly flaccid and filling with blood, which escaped from time to time. She had taken brandy and ergot, to which I added milk and gave it freely. I found the fundus uteri high up and the only part in a state of contraction, the rest being expanded, capacious, and flabby. I introduced several pieces of ice into the uterus, after having brought away the clots it contained, and kept introducing some ice into the vagina every few minutes. This produced contraction. I applied a bandage round the body, and cold for a time to the abdomen and sacrum. There was no hæmorrhage after the introduction of the ice; and by giving her twenty drops of

laudanum with the brandy and milk she was composed, slept a little at intervals, and had no hæmorrhage from 9 A.M. up to 3 P.M., when the pulse was restored, but considerable pallor and prostration remained. The quantity of blood lost was considerable, but she recovered without an unfavourable symptom.]

We have hitherto described the different means by which, in hæmorrhages occurring under a variety of circumstances, we endeavour to put a stop to the loss of blood ; but in many cases, there are other indications to be fulfilled, requiring the attention and judgment of the physician. Some of the most frequent and important complications are various disorders of the stomach and bowels. Gastric irritation is not unfrequently met with in connexion with uterine hæmorrhage, as cause and effect, and if not removed, may produce a recurrence of hæmorrhage or fever of a dangerous kind. The removal, therefore, of offending matters from the stomach is in the highest degree important, and to be effected either by emetics or purgatives. The former should be used with caution, although by some they have been very highly recommended. In our opinion emetics are admissible only when the stomach is loaded and oppressed, the patient not very plethoric or sensitive, and the hæmorrhage not so severe as to make the stopping it the first and most important indication.

With respect to purgatives, we should always abstain from them whilst the loss of blood is in any degree considerable ; but when hæmorrhage continues in a slight degree, and appears to be kept up by impurities within the bowels, it is proper to effect a clearance by mild cooling purgatives, or glysters ; the latter deserving the preference because they, at the same time, act by soothing irritation of the womb, if that be present. If

metrorrhagia is accompanied with diarrhœa, this must be remedied as soon as possible, because under any circumstances it will increase the bleeding. Here opium is especially to be recommended.

Very often the stomach is sympathetically or primarily affected in another way: symptoms of a pure *cardialgia nervosa* occur, with either great irritation of the stomach, nausea and actual vomiting, or a feeling of oppression and debility. This condition is very uncomfortable to the patient, and not free from danger, since it may give rise to a depression of the nervous system which often continues even after the hæmorrhage has been suppressed. For this state, *Burns* advises a compress dipped in laudanum or spirit of camphor to be laid over the stomach, and opium to be given in substance when the debility is very great. An infusion of capsicum is also very useful. General stimulants, as recommended for passive hæmorrhages, are, as a rule, appropriate here; and if the symptoms are obstinate, stomachics, aromatics, and æthereal medicines, as Tr. Valerian. Æth., Sp. Æth. Nitr., &c., may be given in addition. Should the symptoms assume more of a spasmodic form, small doses of Opium, Tr. Castorei, Camphor, &c. will be proper.

Other untoward symptoms may arise, and foremost amongst them stands *syncope*. This may arise from different causes, being either a symptom accompanying relaxation of the uterus, or the consequence of immoderate loss of blood. The former may take place very early, before much blood has escaped, without, however, preventing further loss. Its treatment consists less in giving powerful general stimulants than in exciting contraction of the uterus, for when this happens

it quickly ceases. Syncope, arising from actual loss of blood, has by some been considered beneficial, as a natural remedy for stopping hæmorrhage; but this is not always the effect: the hæmorrhage frequently continues during the syncope, and at all events the syncope itself is sufficiently dangerous for us not to regard it with indifference. Entire rest in the recumbent posture, the administration of stimulants when the patient is temporarily roused by means of sprinkling cold water on the face, applying strong scents to the nose, bathing the temples with wine or brandy, and at the same time endeavouring to excite uterine contraction, will prove useful for stopping the loss and removing the syncope. If the nervous affection declare itself in the nature of spasm or convulsion, opiates are to be prescribed.

If, in severe hæmorrhage, the extremities become cold, and other dangerous appearances present themselves, which make us apprehensive of the death of the patient, besides the other remedies, the hands and feet should be rubbed with warm stimulating liquids, warmed with hot bottles, wrapped up in warm flannels, or have mustard plasters applied to them.

After we have succeeded in subduing the first attack of hæmorrhage, two important indications still remain, namely, to prevent a return of the bleeding, and to remedy the evil consequences it may have left behind. The former is of the greatest importance, for in all metrorrhagies there is a tendency to relapse; and when the physician leaves a patient with the conviction that the bleeding is completely stopped, and that he may rest contented about her, he may perhaps after a little while be summoned back, and find her in a most dangerous condition. When, during pregnancy, a

threatened abortion or placenta prævia accompanies the bleeding, or this depends upon other causes which cannot with certainty be removed, we must always be prepared for a repetition of the bleeding. In hæmorrhages during labour and before the expulsion of the placenta, we must also bear in mind that the bleeding may in a moment return, and we must never leave the patient until the temporary cause of it is removed. But even in hæmorrhage after labour, depending upon congestion or a relaxed state of the uterus, a return of the bleeding is always to be feared, if the patient be not properly attended to. It will be necessary, therefore, to watch the patient for some days, and not lay aside the remedies employed, but rather give them in smaller doses until all danger of a return of hæmorrhage has passed away. In hæmorrhages dependent upon congestion of the generative organs, rest, cooling treatment, and the removal of all excitement are necessary; in passive hæmorrhage during pregnancy, we give the milder astringents: should hæmorrhage of this kind appear after labour, a tight band round the body is a very appropriate application. The debility which generally remains as a consequence of hæmorrhage we need not be too anxious to remove; the female constitution quickly rallies after loss of blood, and if we are in too much haste to administer stimulants and tonics, we are apt to bring on a state of troublesome excitement. We should therefore endeavour to recruit the strength by degrees, removing every injurious influence, allowing the patient a nourishing but not a stimulating diet, prescribing tonics, as steel, cinchona, &c., in very small doses, and as a drink, a mixture of mineral acids and water. We may here notice a very prevalent but er-

roneous opinion, namely, that patients ought not to be allowed to sleep who are suffering from an attack of hæmorrhage. This idea was in former times encouraged even by physicians; and Stoll remarks in his *Prælect.* T. 11. p. 400., “*Somnus ejusmodi hæmorrhagias recrudescere facit.*” Sleep is nevertheless one of the greatest restoratives under such circumstances; and all we have to do is to guard against the possibility of hæmorrhage recurring without its being immediately detected.

Internal uterine hæmorrhages are considered at all times, and under all circumstances, the most dangerous; and, in fact, they very often prove fatal. The danger depends upon the concealment of the bleeding, and may be extreme before either the physician or the attendants are at all aware of what is going forward. The countenance suddenly becomes expressive of the greatest anxiety and depression, the patient presents a pale death-like aspect, the extremities become cold, and the strength fails to such a degree that the patient quickly dies. The patient experiences a feeling of uneasiness and painful distension of the abdomen, especially in the situation of the uterus, and speaks of it, unless prevented by a state of syncope. Sometimes she has a distinct perception of something flowing in the abdomen. If we examine the uterus through the parietes of the abdomen, we find it distended, and if the bleeding continues, we feel it increasing in size during the examination. The nervous system soon becomes affected, convulsions and cramps ensue, and death soon closes the scene.

Internal hæmorrhages are met with at any period, but most frequently after labour. Its occurrence during pregnancy has been noticed by *Albinus*, *Mauriceau*,

La Motte, Levret, Baudelocque, Merriman, Ingleby, Balme, Delaforterie, and others, but denied by *Velpeau*, who says that, although a small quantity of blood may accumulate between the uterus and ovum, it will never do so in sufficient quantity to occasion dangerous symptoms, or to constitute an internal hæmorrhage.

If blood escapes into the cavity of the membranes and these do not give way to the pressure, or if they close up the os uteri, or the blood coagulates so as not to escape externally, hæmorrhage may in this way produce serious symptoms during pregnancy; but it is generally after the expulsion of the child that internal hæmorrhage occurs, when either a portion of the placenta or coagulated blood prevents the blood escaping through the os uteri, or when this contracts spasmodically, the body and fundus remaining in a relaxed condition; and in these cases dangerous symptoms appear the more rapidly, because the loss may be very considerable and the uterus readily gives way to the distension. It may further be observed, that internal hæmorrhages are most frequent in delicate women, and such as have borne many children; and that they sometimes occur frequently at some particular period. During the epidemic of cholera at Berlin, many cases occurred in women who in previous labours had had no hæmorrhage. The labour was natural, the placenta expelled; and the uterus contracted readily and powerfully; but soon afterwards indications of internal hæmorrhage appeared, the uterus felt distended, but firm and hard; and, on examination, was found to be completely filled with coagulated blood. We have since attended the same women without any hæmorrhage whatever.

As soon as symptoms make their appearance which lead to the suspicion of internal hæmorrhage, we should immediately examine the abdomen, and the uterus *per vaginam*, with the greatest care, in order to discover what has prevented the blood from escaping externally. If the mouth of the uterus be closed by the placenta or a clot of blood, these must be immediately removed; and if contraction of the os uteri be the cause, the accoucheur is to introduce one finger after another and endeavour gently to dilate it. The mere removal of these impediments, however, is not all we have to do; for on account of the danger attending hæmorrhage of this description, it is always better to retain the hand in the uterus until we find that it contracts uniformly and forces out the hand. If there be a relaxed state of the fundus and body of the uterus, we are to stimulate the internal surface of this organ in the manner before recommended. When the uterus has been emptied and the bleeding has ceased, we must employ such internal and external remedies as seem most appropriate in each particular case; apply a compress over the uterus, and secure it by a body-belt passed tightly round the abdomen; watch the patient carefully in order to prevent fresh accumulation of blood within the uterus, and continue the use of these measures until all cause for anxiety shall have passed away.

Hæmorrhage from the vagina may happen at any time, during pregnancy, labour, or in the puerperal state. The symptoms which accompany it depend entirely, or nearly so, upon the loss of blood itself; for the sympathy existing between the vagina and other organs is less than when the uterus is concerned, and the various circumstances of pregnancy have no influence here, so

that the nervous system plays but a small part in the matter. The causes which produce hæmorrhage from the vagina are sometimes the same as those which occasion uterine hæmorrhage, but it most frequently arises from the bursting of varicose veins or mechanical injuries. Hæmorrhage from burst varices in the vagina is not unfrequently met with in women of relaxed, flabby constitutions; but in most cases the quantity of blood lost is not considerable; the bleeding, however, may frequently recur, and occasionally a large quantity is lost. The remedies to be employed are the horizontal posture, the internal use of the mineral acids, and, in severe cases, the *tampon*. During labour, these hæmorrhages are often very considerable, and if their nature be not discovered, a large quantity of blood may be lost in a short time. They may be ascertained by internal examination; and a dossil of lint dipped in vinegar should be laid upon the spot, and the vagina filled with charpie. If the hæmorrhage will not cease on account of the progress of labour, the latter must be brought to a termination by artificial means. When the labour is over, lint dipped in vinegar is to be applied to the ruptured varix, and the vagina entirely filled with sponge or charpie; whilst at the same time we endeavour to maintain the uterus in a state of contraction so as to prevent internal hæmorrhage. In slight cases, it will be sufficient to close the ruptured vessel for some time with the end of the finger. Hæmorrhage arising from mechanical injury to the uterus or vagina, is to be treated according to the rules laid down for the management of such accidents.

A P P E N D I X.

*Case of Placenta Prævia terminating successfully.
Communicated by a Friend in the country.*

“I was called to Mrs. S. E. by a note from the Relieving Officer, which stated it to be a case of ‘sickness;’ but on inquiry of the husband, who brought the note at 11 A. M., I ascertained that his wife had been suffering for three weeks from uterine hæmorrhage, and that during the previous night she had lost a great deal of blood, was much reduced, and was near her confinement. From this account I was led to suspect detachment of the placenta, and therefore went immediately to see the patient. On examination, *per vaginam*, I found the os uteri flabby and open, so as freely to admit my finger; the head presenting naturally; the placenta intervening between it and my finger. The placenta was partially detached all round the os, and the rectum was full of hardened fœces. As there was no uterine pain, I plugged the vagina carefully, gave ℞ Tr. Opii every four hours, and enjoined perfect quietude; leaving, also, directions to be sent for as soon as labour pains came on. At 2 A. M. I was summoned, and arrived at about 3, when I found that labour was progressing very rapidly.

The placenta was projecting at the os externum, a portion of it being wedged at the brim of the pelvis by the head, which was firmly pressing down. The midwife had removed the plug; and two large firm clots, which she told me was the after-birth. I first pressed out the contents of the rectum, and then removed that portion of the placenta which was in the vagina, by rending it away; then, the os being fully dilated, I immediately delivered with the vectis, and in an hour from the time of my arrival left the woman in safety. The child was of course stillborn; but no loss, save the two clots, had occurred since I left her at noon.

“This case suggested to me the propriety of giving time to such cases; taking care, meanwhile, to provide against dangerous hæmorrhage by effectual plugging and constant watching. If I had taken more active measures, I might have given rise to flooding, which, after what she had previously lost, might have been fatal. The loaded rectum and the vaginal plug appeared to restrain the loss until the os was sufficiently open to allow the head to descend; and the case proves that the rule ‘to turn and deliver’ is not in *every* instance the only justifiable resource; but that discretion and judgment are required to decide whether nature, with the simple precautionary measures I have mentioned in this case, should be left to her own resources, or that the prescribed rules of practice should be under all circumstances resorted to.”

This is an instance in which it was unnecessary to resort to the speedy accomplishment of delivery; and such cases will now and then occur in healthy country females. But they are exceptions to the general rule; and afford additional examples of the fact that (the prac-

itioner of midwifery must, in order to do justice to his patients and obtain credit for himself, direct his mind to the *pros* and *cons* of every individual case, and apply the rules of practice (in which he ought, without excuse, to be well grounded) with such modifications as will meet the peculiar circumstances in which he may be placed in any and every case of unusual difficulty or danger.

Case of Fibrous Tumour of the Uterus successfully removed.

Mrs. —, aged 43. Enjoyed good health in early life, married thirteen years ago, and has never been pregnant. Regular at the monthly periods, and never complained of much pain at those times until about two years ago, when menstruation began to be attended with suffering and the loss became unusually profuse, accompanied also with the expulsion of coagula. I was first called to her on the 20th of April, 1851, on account of menorrhagia attended with considerable pain and the frequent expulsion of clots, producing a degree of faintness and debility that seemed alarming, and induced me to urge the necessity of an examination *per vaginam*. I found the uterus enlarged and hardened, as if from scirrhus, but her general appearance was not indicative of cancerous cachexy. Sexual intercourse had for a

long time been painful, and for many months had not taken place. Countenance expressive of the effects of loss of blood. Pulse very small and feeble; stomach irritable; bowels irregular and troublesome in their action. The hæmorrhage had lasted twelve days, and she was very much reduced. The local application of cold, and the use of astringent medicines and opiates, relieved her; and I recommended daily frictions over the uterine region with equal parts of mercurial and iodine ointments. A similar state of things went on; sometimes she was better and sometimes worse; but always exhibited a buoyant spirit, patience under suffering, and a great tendency to return to health when not weighed down with pain and loss of blood. In March, 1852, she went to London to consult an eminent accoucheur physician; but I had previously repeatedly examined the tumor, and, from the extremely healthy appearance of the mucous covering of the os and cervix uteri, had dismissed from my mind the idea I had at my first visit entertained, that the hardness I felt might have been of a malignant character. At this period the discharge had considerably lessened in consequence of treatment; but for the last six months she had suffered more pain at the monthly periods, which have been followed by nearly colourless discharge of a nature to stiffen linen. Her general health was somewhat improved; there was no abdominal swelling, no œdema of the lower limbs, and her appetite was improved. When the bowels are relieved she suffers pain in the situation of the head of the colon, and the act of defecation is always difficult, unless the motions are quite soft or fluid; and there is often considerable flatulence. On pressing the fingers deeply down into the brim of the pelvis, an unusual

resistance can be felt in the centre. The os uteri was healthy and directed backwards; the neck shortened; and above it anteriorly was a considerable swelling, of great firmness, apparently in the anterior wall of the uterus and adhering to the right side of the pelvis.

After this, Mrs. — paid a visit to the Isle of Wight, seemingly much improved in health; and on her return through London consulted another physician, who thought the disease was a fibrous tumor, but at the same time feared it might be malignant. He recommended alterative medicines and the frequent application of hard Unguent. Hydrarg. to the cervix; also the occasional application of leeches; but this last recommendation was not followed, as, under the possibility of the disease being malignant, I felt reluctant to cause any abrasion of the mucous surface of the os uteri.

At one time I entertained the idea that an attempt at enucleation might be desirable, but the uncertainty in the diagnosis rendered it unjustifiable.

After long-continued treatment, I fancied the tumor decreased in size, and I could raise it higher in the pelvis. This I was often called upon to do on account of the relief it gave to the severe suffering the patient at times endured. It happened every now and then that the pains were as severe as those of labour, and I frequently found the cervix elongated, conical, and pressing painfully against the sacrum. Up to this period the os uteri was always felt as a mere chink, and was often too high and too far back to be easily reached.

On the 13th of August, 1853, when summoned for the purpose of affording relief by raising, as usual, the uterus higher up in the pelvis, I discovered the os uteri dilated by a substance pressing firmly against it and

protruding a short distance through it. I then felt sure that the tumor, which had hitherto been of a doubtful character, had declared itself to be a fibrous polypus; and that the almost intolerable pains the patient had for some time endured were caused by the uterus attempting to expel it. For a week, efforts were made to dilate the uterus, and on the 20th I tried to surround the tumor by a ligature with Gooch's canula. This was attended with such excessive pain that I soon desisted, but no ill consequences ensued; and I had every reason to believe, not only that the operation could be successfully performed, but that the pain was greatly aggravated by a very sensitive condition of the nervous system. I therefore requested the assistance of a surgical friend, who, on the 22nd, applied a ligature composed of gold twist, by means of Gooch's instrument, around the neck of the tumor, which was large and attached by a thick pedicle to the fundus uteri. The operation was attended with great pain; but my experience of a similar degree and kind of pain having been occasioned two days ago by the mere attempt to pass the instrument round the tumor without any pressure from the ligature, freed us from the apprehension that we were doing injury to the uterus. The ligature was tightened twice a day, and on the 28th gave way, having evidently cut through the tumor. On the following day, I found the tumor loose in the vagina, but had some considerable difficulty in removing it, owing to the soreness and narrowness of the vagina; and when removed, I found it to be of the usual fibrous character, and five ounces in weight. On the 4th of September our patient was downstairs; on the 6th she was out walking in the garden. No untoward symptom occurred from the time of the operation;

and we had the gratification of witnessing a rapid and perfect return to health in a patient whose life had frequently been in great jeopardy, and whose sufferings for some time past had been so constant and severe as to render life itself a burden, and deprive her entirely of the power to perform the relative duties which in her position in life devolved upon her.

At the period in which I am now writing, February, 1856, this lady is in perfect health, and has remained so ever since the last report; the uterus being free from all disease, and having resumed all its healthy functions as well as if nothing had ever happened to interrupt them.

THE END.

